Edmond A Jonckheere

List of Publications by Year
in descending order

123	2,055	304368	301761
papers	citations	22 h-index	39 g-index

123	123	123	916
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A new set of invariants for linear systems--Application to reduced order compensator design. IEEE Transactions on Automatic Control, 1983, 28, 953-964.	3.6	251
2	A first principles solution to the nonâ€singular H^{â^ž} control problem. International Journal of Robust and Nonlinear Control, 1991, 1, 171-185.	2.1	220
3	Lâ^ž-compensation with mixed sensitivity as a broadband matching problem. Systems and Control Letters, 1984, 4, 125-129.	1.3	90
4	Principal component analysis of flexible systems--Open-loop case. IEEE Transactions on Automatic Control, 1984, 29, 1095-1097.	3.6	67
5	Ollivier-Ricci Curvature-Based Method to Community Detection in Complex Networks. Scientific Reports, 2019, 9, 9800.	1.6	55
6	Statistical Structure Learning to Ensure Data Integrity in Smart Grid. IEEE Transactions on Smart Grid, 2015, 6, 1924-1933.	6.2	54
7	Convexity of the joint numerical range: topological and differential geometric viewpoints. Linear Algebra and Its Applications, 2004, 376, 143-171.	0.4	53
8	Variational calculus for descriptor problems. IEEE Transactions on Automatic Control, 1988, 33, 491-495.	3.6	52
9	Phase margins for multivariable control systems. International Journal of Control, 1990, 52, 485-498.	1.2	50
10	Euclidean versus Hyperbolic Congestion in Idealized versus Experimental Networks. Internet Mathematics, 2011, 7, 1-27.	0.7	48
11	Scaled Gromov hyperbolic graphs. Journal of Graph Theory, 2008, 57, 157-180.	0.5	46
12	Power spectrum reduction by optimal Hankel norm approximation of the phase of the outer spectral factor. IEEE Transactions on Automatic Control, 1985, 30, 1192-1201.	3.6	44
13	A spectral characterization of Hâ^ž-optimal feedback performance and its efficient computation. Systems and Control Letters, 1986, 8, 13-22.	1.3	44
14	Stochastic balancing and approximation-stability and minimality. IEEE Transactions on Automatic Control, 1984, 29, 744-746.	3.6	40
15	Positive and negative solutions of dual Riccati equations by matrix sign function iteration. Systems and Control Letters, 1989, 13, 109-116.	1.3	37
16	Geometry of network security. , 2004, , .		37
17	Wireless network capacity versus Ollivier-Ricci curvature under Heat-Diffusion (HD) protocol. , 2014, , .		29
18	Progress Towards Computational 3-D Multicellular Systems Biology. Advances in Experimental Medicine and Biology, 2016, 936, 225-246.	0.8	27

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19	Eigenstructure vs Constrained H Design for Hypersonic Winged Cone. Journal of Guidance, Control, and Dynamics, 2001, 24, 648-658.	1.6	26
20	Dynamic Neural-Based Buffer Management for Queuing Systems With Self-Similar Characteristics. IEEE Transactions on Neural Networks, 2005, 16, 1163-1173.	4.8	26
21	Spectral theory of the linear-quadratic optimal control problem: Discrete-time single-input case. IEEE Transactions on Circuits and Systems, 1978, 25, 810-825.	0.9	25
22	Spectral theory of the linear-quadratic optimal control problem: A new algorithm for spectral computations. IEEE Transactions on Automatic Control, 1980, 25, 880-888.	3.6	25
23	Differential topology of numerical range. Linear Algebra and Its Applications, 1998, 279, 227-254.	0.4	25
24	Quantum versus simulated annealing in wireless interference network optimization. Scientific Reports, 2016, 6, 25797.	1.6	24
25	Robust finite-time chaos synchronization of time-delay chaotic systems and its application in secure communication. Transactions of the Institute of Measurement and Control, 2018, 40, 1177-1187.	1.1	24
26	Singular value analysis of deformable systems. Circuits, Systems, and Signal Processing, 1982, 1, 447-470.	1.2	21
27	Fast computation of achievable feedback performance in mixed sensitivity<tex>H^{âˆž}</tex>design. IEEE Transactions on Automatic Control, 1987, 32, 896-906.	3.6	21
28	Quantifying differences in cell line population dynamics using CellPD. BMC Systems Biology, 2016, 10, 92.	3.0	21
29	Gene Expression Is Not Random: Scaling, Long-Range Cross-Dependence, and Fractal Characteristics of Gene Regulatory Networks. Frontiers in Physiology, 2018, 9, 1446.	1.3	20
30	ContrÃ1e du trafic sur les rÃ©seaux Ã gÃ©omÃ©trie hyperbolique. Vers une thÃ©orie gÃ©omÃ©trique de la sÃ©curitÃ© de l'acheminement de l'information. Journal Europeen Des Systemes Automatises, 2003, 37, 145-159.	0.3	20
31	New bound on the sensitivity of the solution of the Lyapunov equation. Linear Algebra and Its Applications, 1984, 60, 57-64.	0.4	19
32	Robust Stabilization of a Family of Plants with Varying Number of Right Half Plane Poles. , 1986, , .		19
33	Upper bound on scaled Gromov-hyperbolic Î´. Applied Mathematics and Computation, 2007, 192, 191-204.	1.4	19
34	Singular filtering problems. Systems and Control Letters, 1989, 13, 339-344.	1.3	17
35	Evidence of long-range dependence in power grid. , 2016, , .		17
36	Combined sequence of Markov parameters and moments in linear systems. IEEE Transactions on Automatic Control, 1989, 34, 379-382.	3.6	16

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37	Design of Feedback Control Laws for Information Transfer in Spintronics Networks. IEEE Transactions on Automatic Control, 2018, 63, 2523-2536.	3.6	16
38	On the existence of a negative semidefinite, antistabilizing solution to the discrete-time algebraic Riccati equation. IEEE Transactions on Automatic Control, 1981, 26, 707-712.	3.6	14
39	Heat-Diffusion: Pareto optimal dynamic routing for time-varying wireless networks. , 2014, , .		14
40	Jonckheereâ€Terpstra test for nonclassical error versus logâ€sensitivity relationship of quantum spin network controllers. International Journal of Robust and Nonlinear Control, 2018, 28, 2383-2403.	2.1	13
41	Stabilization of chaotic dynamics: a modern control approach. International Journal of Control, 1996, 64, 663-677.	1.2	12
42	Curvature of Indoor Sensor Network: Clustering Coefficient. Eurasip Journal on Wireless Communications and Networking, 2009, 2008, .	1.5	12
43	Information transfer fidelity in spin networks and ring-based quantum routers. Quantum Information Processing, 2015, 14, 4751-4785.	1.0	12
44	Multivariable gain margin. International Journal of Control, 1991, 54, 337-365.	1.2	11
45	Geometry of power flow in negatively curved power grid. , 2010, , .		11
46	Scaled Gromov Four-Point Condition for Network Graph Curvature Computation. Internet Mathematics, 2011, 7, 137-177.	0.7	11
47	Hâˆž longitudinal control of crippled trijet aircraft with throttles only. Control Engineering Practice, 1998, 6, 601-613.	3.2	10
48	Quantum networks: anti-core of spin chains. Quantum Information Processing, 2014, 13, 1607-1637.	1.0	10
49	Time optimal information transfer in spintronics networks. , 2015, , .		10
50	Interference constrained network control based on curvature. , 2016, , .		10
51	Heat diffusion algorithm for resource allocation and routing in multihop wireless networks. , 2012, , .		9
52	Ollivier-Ricci curvature and fast approximation to tree-width in embeddability of QUBO problems. , 2014, , .		9
53	Kendall's tau of frequency Hurst exponent as blackout proximity Margin. , 2016, , .		9
54	Differential geometric treewidth estimation in adiabatic quantum computation. Quantum Information Processing, 2016, 15, 3951-3966.	1.0	9

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55	On the predictability of data network traffic. , 0, , .		8
56	On a standing wave Central Pattern Generator and the coherence problem. Biomedical Signal Processing and Control, 2010, 5, 336-347.	3.5	8
57	Structured Singular Value Analysis for Spintronics Network Information Transfer Control. IEEE Transactions on Automatic Control, 2017, 62, 6568-6574.	3.6	8
58	Generalization of optimal Hankel-norm and balanced model reduction by bilinear mapping. International Journal of Control, 1987, 45, 1751-1769.	1.2	7
59	An L^{â^ž}error bound for the phase approximation problem. IEEE Transactions on Automatic Control, 1987, 32, 517-518.	3.6	7
60	Complex-Analytic Theory of the Î¼-Function. Journal of Mathematical Analysis and Applications, 1999, 237, 201-239.	0.5	7
61	LDV approach to circular trajectory tracking of the underactuated hovercraft model. , 2006, , .		7
62	Geometry and curvature of spin networks. , 2011, , .		7
63	Dirichlet's principle on multiclass multihop wireless networks. , 2014, , .		7
64	PMU Change Point Detection of Imminent Voltage Collapse and Stealthy Attacks. , 2018, , .		7
65	Fractional Dynamics of PMU Data. IEEE Transactions on Smart Grid, 2021, 12, 2578-2588.	6.2	7
66	Chaotic Disturbance Rejection and Bode Limitation. , 1992, , .		7
67	A further simplification to Jury's stability test. IEEE Transactions on Circuits and Systems, 1989, 36, 463-464.	0.9	6
68	Curvature of quantum rings. , 2012, , .		6
69	Differential topology of adiabatically controlled quantum processes. Quantum Information Processing, 2013, 12, 1515-1538.	1.0	6
70	Minimum delay in class of throughput-optimal control policies on wireless networks. , 2014, , .		6
71	Effective resistance criterion for negative curvature: Application to congestion control. , 2016, , .		6
72	Simulated versus reduced noise quantum annealing in maximum independent set solution to wireless network scheduling. Quantum Information Processing, 2019, 18, 1.	1.0	6

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73	Inferring functional communities from partially observed biological networks exploiting geometric topology and side information. Scientific Reports, 2022, 12, .	1.6	6
74	Nonlinear switching dynamics in surface electromyography of the spine. , 0, , .		5
75	Multi-fractal geometry of finite networks of spins: Nonequilibrium dynamics beyond thermalization and many-body-localization. Chaos, Solitons and Fractals, 2017, 103, 622-631.	2.5	5
76	Characterization of passive systems through their closed-loop LQG characteristic values. IEEE Transactions on Circuits and Systems, 1987, 34, 324-326.	0.9	4
77	Real versus Complex Robustness Margin Continuity as a Smooth versus Holomorphic Singularity Problem. Journal of Mathematical Analysis and Applications, 1999, 237, 541-572.	0.5	4
78	Structural stability of linear dynamically varying (LDV) controllers. Systems and Control Letters, 2001, 44, 177-187.	1.3	4
79	Sensitivity and robustness of quantum spin-1 rings to parameter uncertainty. , 2017, , .		4
80	Heat-Diffusion: Pareto Optimal Dynamic Routing for Time-Varying Wireless Networks. IEEE/ACM Transactions on Networking, 2020, 28, 1520-1533.	2.6	4
81	Tracking Trojan asteroids in periodic and quasi-periodic orbits around the Jupiter Lagrange points using LDV techniques. , 0, , .		3
82	The four-block Adamjan-Arov-Krein problem. Journal of Mathematical Analysis and Applications, 1992, 170, 322-342.	0.5	3
83	Bounded flatness in Q-triangulated regular N-simplexes. Applied Mathematics and Computation, 1997, 88, 177-198.	1.4	3
84	Relationships between Linear Dynamically Varying Systems and Jump Linear Systems. Mathematics of Control, Signals, and Systems, 2003, 16, 207-224.	1.4	3
85	Network Spinal Analysis. Journal of Alternative and Complementary Medicine, 2009, 15, 469-470.	2.1	3
86	Evidence of spatio-temporal transition to chaos in the spine. , 2010, , .		3
87	The existence of a voltage collapse solution in the static-dynamic gap. , 2016, , .		3
88	Empirical evaluation of the heat-diffusion collection protocol for wireless sensor networks. Computer Networks, 2017, 127, 217-232.	3.2	3
89	Robustness of Energy Landscape Control for Spin Networks Under Decoherence. , 2018, , .		3
90	Modeling of PMU Data Using ARFIMA Models. , 2018, , .		3

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91	Effect of quantum mechanical global phase factor on error versus sensitivity limitation in quantum routing. , 2019, , .		3
92	A geometric approach to model matching reconfigurable propulsion control. , 2000, , .		3
93	Inversion of Toeplitz operators, Levinson equations, and Gohberg-Krein factorizationâ€"A simple and unified approach for the rational case. Journal of Mathematical Analysis and Applications, 1982, 87, 295-310.	0.5	2
94	L âˆž error bound for the phase matching approximation (the one-step-at-a-time Hankel norm model) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	1.2	2
95	Worm propagation and defense over hyperbolic graphs. , 2004, , .		2
96	Cooperative “curvature-driven” control of mobile autonomous sensor agent network. , 2007, , .		2
97	Control-assisted decoherence-free manifolds. , 2010, , .		2
98	Stationary regime for standing wave central pattern generator. , 2015, , .		2
99	Load aggregation effect in power grid. , 2016, , .		2
100	Ollivier-Ricci Curvature Approach to Cost-Effective Power Grid Congestion Management. , 2019, , .		2
101	Visualization of a stationary CPG-revealing spinal wave. Studies in Health Technology and Informatics, 2006, 119, 198-200.	0.2	2
102	On stochastic model reduction. IEEE Transactions on Automatic Control, 1987, 32, 530-531.	3.6	1
103	State-space algorithm for multivariable phase matching approximation. , 1987, , .		1
104	Structural stability of linear dynamically varying (LDV) controllers. , 0, , .		1
105	Analysis and synthesis for linear set-valued dynamically varying systems. , 2000, , .		1
106	Kolmogorov-sinai causality in chaotically intertwined dynamics: A heart rate variability case study. , 2008, , .		1
107	Stationary versus bifurcation regime for standing wave central pattern generator. Biomedical Signal Processing and Control, 2017, 32, 57-68.	3.5	1
108	Curvature, Entropy, Congestion Management and the Power Grid. , 2019, , .		1

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109	Congestion Managment for Cost-effective Power Grid Load Balancing using FACTS and Energy Storage Devices allocated via Grid Curvature Means. , 2019, , .		1
110	Nonlinearity Design With Power-Law Tails for Correlation Detection in Impulsive Noise. IEEE Access, 2020, 8, 40667-40679.	2.6	1
111	From Sioux City to the X-33. Annual Reviews in Control, 1999, 23, 91-108.	4.4	1
112	ChiroSensor -- an array of non-invasive sEMG electrodes. Studies in Health Technology and Informatics, 2005, 111, 234-6.	0.2	1
113	Modified Cauer form. Electronics Letters, 1988, 24, 1487.	0.5	0
114	Spectral theory of H/sup âˆž/ filters and smoothers. , 0, , .		0
115	H âˆž Control of a Nonlinear System using Simplicial Algorithms. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1994, 27, 255-260.	0.4	0
116	Hankel operator and Hâˆž distance problem over a simply-connected domain. International Journal of Control, 1995, 61, 897-916.	1.2	0
117	A Brouwer domain invariance approach to boundary behavior of Nyquist maps for uncertain systems. Mathematics of Control, Signals, and Systems, 1998, 11, 357-371.	1.4	0
118	Simplicial algorithms for computing stationary probabilities of stochastic matrices. Applied Mathematics and Computation, 1998, 93, 207-217.	1.4	0
119	Linear dynamically varying linear quadratic control of systems with complicated dynamics. , 0, , .		0
120	LDV control over compact riemannian manifolds. , 2010, , .		0
121	Indirect control invariance of Decoherence-Splitting Manifold (DSM). , 2014, , .		0
122	Identity Based Approach Under a Unified Service Model for Secure Content Distribution in ICN. , 2018, , .		0
123	Bursting Rate Variability. Frontiers in Physiology, 2021, 12, 724027.	1.3	0