

Edmond A Jonckheere

List of Publications by Year in descending order

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123
papers

2,055
citations

304368

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301761

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123
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123
docs citations

123
times ranked

916
citing authors

#	ARTICLE	IF	CITATIONS
1	Inferring functional communities from partially observed biological networks exploiting geometric topology and side information. <i>Scientific Reports</i> , 2022, 12, .	1.6	6
2	Fractional Dynamics of PMU Data. <i>IEEE Transactions on Smart Grid</i> , 2021, 12, 2578-2588.	6.2	7
3	Bursting Rate Variability. <i>Frontiers in Physiology</i> , 2021, 12, 724027.	1.3	0
4	Heat-Diffusion: Pareto Optimal Dynamic Routing for Time-Varying Wireless Networks. <i>IEEE/ACM Transactions on Networking</i> , 2020, 28, 1520-1533.	2.6	4
5	Nonlinearity Design With Power-Law Tails for Correlation Detection in Impulsive Noise. <i>IEEE Access</i> , 2020, 8, 40667-40679.	2.6	1
6	Ollivier-Ricci Curvature-Based Method to Community Detection in Complex Networks. <i>Scientific Reports</i> , 2019, 9, 9800.	1.6	55
7	Curvature, Entropy, Congestion Management and the Power Grid. , 2019, , .		1
8	Ollivier-Ricci Curvature Approach to Cost-Effective Power Grid Congestion Management. , 2019, , .		2
9	Congestion Managment for Cost-effective Power Grid Load Balancing using FACTS and Energy Storage Devices allocated via Grid Curvature Means. , 2019, , .		1
10	Effect of quantum mechanical global phase factor on error versus sensitivity limitation in quantum routing. , 2019, , .		3
11	Simulated versus reduced noise quantum annealing in maximum independent set solution to wireless network scheduling. <i>Quantum Information Processing</i> , 2019, 18, 1.	1.0	6
12	Design of Feedback Control Laws for Information Transfer in Spintronics Networks. <i>IEEE Transactions on Automatic Control</i> , 2018, 63, 2523-2536.	3.6	16
13	Jonckheereâ€™Terpstra test for nonclassical error versus logâ€™sensitivity relationship of quantum spin network controllers. <i>International Journal of Robust and Nonlinear Control</i> , 2018, 28, 2383-2403.	2.1	13
14	Robust finite-time chaos synchronization of time-delay chaotic systems and its application in secure communication. <i>Transactions of the Institute of Measurement and Control</i> , 2018, 40, 1177-1187.	1.1	24
15	PMU Change Point Detection of Imminent Voltage Collapse and Stealthy Attacks. , 2018, , .		7
16	Robustness of Energy Landscape Control for Spin Networks Under Decoherence. , 2018, , .		3
17	Modeling of PMU Data Using ARFIMA Models. , 2018, , .		3
18	Identity Based Approach Under a Unified Service Model for Secure Content Distribution in ICN. , 2018, , .		0

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19	Gene Expression Is Not Random: Scaling, Long-Range Cross-Dependence, and Fractal Characteristics of Gene Regulatory Networks. <i>Frontiers in Physiology</i> , 2018, 9, 1446.	1.3	20
20	Structured Singular Value Analysis for Spintronics Network Information Transfer Control. <i>IEEE Transactions on Automatic Control</i> , 2017, 62, 6568-6574.	3.6	8
21	Empirical evaluation of the heat-diffusion collection protocol for wireless sensor networks. <i>Computer Networks</i> , 2017, 127, 217-232.	3.2	3
22	Multi-fractal geometry of finite networks of spins: Nonequilibrium dynamics beyond thermalization and many-body-localization. <i>Chaos, Solitons and Fractals</i> , 2017, 103, 622-631.	2.5	5
23	Stationary versus bifurcation regime for standing wave central pattern generator. <i>Biomedical Signal Processing and Control</i> , 2017, 32, 57-68.	3.5	1
24	Sensitivity and robustness of quantum spin-1 rings to parameter uncertainty. , 2017, , .		4
25	Load aggregation effect in power grid. , 2016, , .		2
26	Kendall's tau of frequency Hurst exponent as blackout proximity Margin. , 2016, , .		9
27	Evidence of long-range dependence in power grid. , 2016, , .		17
28	Differential geometric treewidth estimation in adiabatic quantum computation. <i>Quantum Information Processing</i> , 2016, 15, 3951-3966.	1.0	9
29	Progress Towards Computational 3-D Multicellular Systems Biology. <i>Advances in Experimental Medicine and Biology</i> , 2016, 936, 225-246.	0.8	27
30	The existence of a voltage collapse solution in the static-dynamic gap. , 2016, , .		3
31	Effective resistance criterion for negative curvature: Application to congestion control. , 2016, , .		6
32	Interference constrained network control based on curvature. , 2016, , .		10
33	Quantum versus simulated annealing in wireless interference network optimization. <i>Scientific Reports</i> , 2016, 6, 25797.	1.6	24
34	Quantifying differences in cell line population dynamics using CellPD. <i>BMC Systems Biology</i> , 2016, 10, 92.	3.0	21
35	Information transfer fidelity in spin networks and ring-based quantum routers. <i>Quantum Information Processing</i> , 2015, 14, 4751-4785.	1.0	12
36	Stationary regime for standing wave central pattern generator. , 2015, , .		2

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37	Time optimal information transfer in spintronics networks. , 2015, , .		10
38	Statistical Structure Learning to Ensure Data Integrity in Smart Grid. IEEE Transactions on Smart Grid, 2015, 6, 1924-1933.	6.2	54
39	Indirect control invariance of Decoherence-Splitting Manifold (DSM). , 2014, , .		0
40	Wireless network capacity versus Ollivier-Ricci curvature under Heat-Diffusion (HD) protocol. , 2014, , .		29
41	Dirichlet's principle on multiclass multihop wireless networks. , 2014, , .		7
42	Minimum delay in class of throughput-optimal control policies on wireless networks. , 2014, , .		6
43	Heat-Diffusion: Pareto optimal dynamic routing for time-varying wireless networks. , 2014, , .		14
44	Ollivier-Ricci curvature and fast approximation to tree-width in embeddability of QUBO problems. , 2014, , .		9
45	Quantum networks: anti-core of spin chains. Quantum Information Processing, 2014, 13, 1607-1637.	1.0	10
46	Differential topology of adiabatically controlled quantum processes. Quantum Information Processing, 2013, 12, 1515-1538.	1.0	6
47	Heat diffusion algorithm for resource allocation and routing in multihop wireless networks. , 2012, , .		9
48	Curvature of quantum rings. , 2012, , .		6
49	Geometry and curvature of spin networks. , 2011, , .		7
50	Euclidean versus Hyperbolic Congestion in Idealized versus Experimental Networks. Internet Mathematics, 2011, 7, 1-27.	0.7	48
51	Scaled Gromov Four-Point Condition for Network Graph Curvature Computation. Internet Mathematics, 2011, 7, 137-177.	0.7	11
52	On a standing wave Central Pattern Generator and the coherence problem. Biomedical Signal Processing and Control, 2010, 5, 336-347.	3.5	8
53	LDV control over compact riemannian manifolds. , 2010, , .		0
54	Geometry of power flow in negatively curved power grid. , 2010, , .		11

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55	Evidence of spatio-temporal transition to chaos in the spine. , 2010, , .		3
56	Control-assisted decoherence-free manifolds. , 2010, , .		2
57	Network Spinal Analysis. Journal of Alternative and Complementary Medicine, 2009, 15, 469-470.	2.1	3
58	Curvature of Indoor Sensor Network: Clustering Coefficient. Eurasip Journal on Wireless Communications and Networking, 2009, 2008, .	1.5	12
59	Scaled Gromov hyperbolic graphs. Journal of Graph Theory, 2008, 57, 157-180.	0.5	46
60	Kolmogorov-sinai causality in chaotically intertwined dynamics: A heart rate variability case study. , 2008, , .		1
61	Cooperative “curvature-driven” control of mobile autonomous sensor agent network. , 2007, , .		2
62	Upper bound on scaled Gromov-hyperbolic $\hat{\Gamma}$. Applied Mathematics and Computation, 2007, 192, 191-204.	1.4	19
63	LDV approach to circular trajectory tracking of the underactuated hovercraft model. , 2006, , .		7
64	Visualization of a stationary CPG-revealing spinal wave. Studies in Health Technology and Informatics, 2006, 119, 198-200.	0.2	2
65	Dynamic Neural-Based Buffer Management for Queuing Systems With Self-Similar Characteristics. IEEE Transactions on Neural Networks, 2005, 16, 1163-1173.	4.8	26
66	ChiroSensor -- an array of non-invasive sEMG electrodes. Studies in Health Technology and Informatics, 2005, 111, 234-6.	0.2	1
67	Geometry of network security. , 2004, , .		37
68	Worm propagation and defense over hyperbolic graphs. , 2004, , .		2
69	Convexity of the joint numerical range: topological and differential geometric viewpoints. Linear Algebra and Its Applications, 2004, 376, 143-171.	0.4	53
70	Relationships between Linear Dynamically Varying Systems and Jump Linear Systems. Mathematics of Control, Signals, and Systems, 2003, 16, 207-224.	1.4	3
71	ContrÃle du trafic sur les rÃseaux Ã gÃomÃtrie hyperbolique. Vers une thÃorie gÃomÃtrique de la sÃcuritÃ de l'acheminement de l'information. Journal European Des Systemes Automatises, 2003, 37, 145-159.	0.3	20
72	Structural stability of linear dynamically varying (LDV) controllers. Systems and Control Letters, 2001, 44, 177-187.	1.3	4

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73	Eigenstructure vs Constrained H Design for Hypersonic Winged Cone. Journal of Guidance, Control, and Dynamics, 2001, 24, 648-658.	1.6	26
74	Analysis and synthesis for linear set-valued dynamically varying systems. , 2000, , .		1
75	A geometric approach to model matching reconfigurable propulsion control. , 2000, , .		3
76	Complex-Analytic Theory of the \hat{H}_∞ -Function. Journal of Mathematical Analysis and Applications, 1999, 237, 201-239.	0.5	7
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	From Sioux City to the X-33. Annual Reviews in Control, 1999, 23, 91-108.	4.4	1
79	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
80	Differential topology of numerical range. Linear Algebra and Its Applications, 1998, 279, 227-254.	0.4	25
81	Simplicial algorithms for computing stationary probabilities of stochastic matrices. Applied Mathematics and Computation, 1998, 93, 207-217.	1.4	0
82	H_∞ longitudinal control of crippled trijet aircraft with throttles only. Control Engineering Practice, 1998, 6, 601-613.	3.2	10
83	Bounded flatness in Q-triangulated regular N-simplexes. Applied Mathematics and Computation, 1997, 88, 177-198.	1.4	3
84	Stabilization of chaotic dynamics: a modern control approach. International Journal of Control, 1996, 64, 663-677.	1.2	12
85	Hankel operator and H_∞ distance problem over a simply-connected domain. International Journal of Control, 1995, 61, 897-916.	1.2	0
86	H_∞ Control of a Nonlinear System using Simplicial Algorithms. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1994, 27, 255-260.	0.4	0
87	The four-block Adamjan-Arov-Krein problem. Journal of Mathematical Analysis and Applications, 1992, 170, 322-342.	0.5	3
88	Chaotic Disturbance Rejection and Bode Limitation. , 1992, , .		7
89	A first principles solution to the non-singular H_∞ control problem. International Journal of Robust and Nonlinear Control, 1991, 1, 171-185.	2.1	220
90	Multivariable gain margin. International Journal of Control, 1991, 54, 337-365.	1.2	11

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91	Phase margins for multivariable control systems. International Journal of Control, 1990, 52, 485-498.	1.2	50
92	A further simplification to Jury's stability test. IEEE Transactions on Circuits and Systems, 1989, 36, 463-464.	0.9	6
93	Positive and negative solutions of dual Riccati equations by matrix sign function iteration. Systems and Control Letters, 1989, 13, 109-116.	1.3	37
94	Singular filtering problems. Systems and Control Letters, 1989, 13, 339-344.	1.3	17
95	Combined sequence of Markov parameters and moments in linear systems. IEEE Transactions on Automatic Control, 1989, 34, 379-382.	3.6	16
96	Variational calculus for descriptor problems. IEEE Transactions on Automatic Control, 1988, 33, 491-495.	3.6	52
97	Modified Cauer form. Electronics Letters, 1988, 24, 1487.	0.5	0
98	On stochastic model reduction. IEEE Transactions on Automatic Control, 1987, 32, 530-531.	3.6	1
99	Generalization of optimal Hankel-norm and balanced model reduction by bilinear mapping. International Journal of Control, 1987, 45, 1751-1769.	1.2	7
100	L^{∞} error bound for the phase matching approximation (the one-step-at-a-time Hankel norm model) T_j $E T Q q 0 0 0$ $r g B T$ / $Overlock 10 T f$ P_2 2		
101	State-space algorithm for multivariable phase matching approximation. , 1987, , .		1
102	Fast computation of achievable feedback performance in mixed sensitivity H^{∞} design. IEEE Transactions on Automatic Control, 1987, 32, 896-906.	3.6	21
103	An L^{∞} error bound for the phase approximation problem. IEEE Transactions on Automatic Control, 1987, 32, 517-518.	3.6	7
104	Characterization of passive systems through their closed-loop LQG characteristic values. IEEE Transactions on Circuits and Systems, 1987, 34, 324-326.	0.9	4
105	Robust Stabilization of a Family of Plants with Varying Number of Right Half Plane Poles. , 1986, , .		19
106	A spectral characterization of H^{∞} -optimal feedback performance and its efficient computation. Systems and Control Letters, 1986, 8, 13-22.	1.3	44
107	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
108	New bound on the sensitivity of the solution of the Lyapunov equation. Linear Algebra and Its Applications, 1984, 60, 57-64.	0.4	19

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109	Lâž-compensation with mixed sensitivity as a broadband matching problem. Systems and Control Letters, 1984, 4, 125-129.	1.3	90
110	Stochastic balancing and approximation-stability and minimality. IEEE Transactions on Automatic Control, 1984, 29, 744-746.	3.6	40
111	Principal component analysis of flexible systems–Open-loop case. IEEE Transactions on Automatic Control, 1984, 29, 1095-1097.	3.6	67
112	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
113	Singular value analysis of deformable systems. Circuits, Systems, and Signal Processing, 1982, 1, 447-470.	1.2	21
114	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
115	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
116	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
117	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
118	Tracking Trojan asteroids in periodic and quasi-periodic orbits around the Jupiter Lagrange points using LDV techniques. , 0, , .		3
119	Spectral theory of $H/\sup \hat{z}$ / filters and smoothers. , 0, , .		0
120	Structural stability of linear dynamically varying (LDV) controllers. , 0, , .		1
121	Linear dynamically varying linear quadratic control of systems with complicated dynamics. , 0, , .		0
122	On the predictability of data network traffic. , 0, , .		8
123	Nonlinear switching dynamics in surface electromyography of the spine. , 0, , .		5