

Malcolm C Smith

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

61
papers

1,858
citations

23
h-index

42
g-index

65
ext. papers

2,203
ext. citations

3.1
avg, IF

5.15
L-index

#	Paper	IF	Citations
61	Performance Benefits in Passive Vehicle Suspensions Employing Inerters. <i>Vehicle System Dynamics</i> , 2004 , 42, 235-257	2.8	295
60	The missing mechanical circuit element. <i>IEEE Circuits and Systems Magazine</i> , 2009 , 9, 10-26	3.2	215
59	Passive suspensions incorporating inerters for railway vehicles. <i>Vehicle System Dynamics</i> , 2012 , 50, 263-278		99
58	Experimental Testing and Analysis of Inerter Devices. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2009 , 131,	1.6	95
57	Analytical solutions for optimal ride comfort and tyre grip for passive vehicle suspensions. <i>Vehicle System Dynamics</i> , 2009 , 47, 1229-1252	2.8	92
56	Mechanical Steering Compensators for High-Performance Motorcycles. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2007 , 74, 332-346	2.7	92
55	. <i>IEEE Transactions on Automatic Control</i> , 2011 , 56, 1275-1290	5.9	65
54	A Note on Tests for Positive-Real Functions. <i>IEEE Transactions on Automatic Control</i> , 2009 , 54, 390-393	5.9	63
53	Restricted Complexity Network Realizations for Passive Mechanical Control. <i>IEEE Transactions on Automatic Control</i> , 2009 , 54, 2290-2301	5.9	59
52	Achievable Dynamic Response for Automotive Active Suspensions *. <i>Vehicle System Dynamics</i> , 1995 , 24, 1-33	2.8	55
51	Graphs, causality, and stabilizability: Linear, shift-invariant systems on $L_2[0, \infty]$ <i>Mathematics of Control, Signals, and Systems</i> , 1993 , 6, 195-223	1.3	51
50	Robust Stability of Feedback Systems: A Geometric Approach Using the Gap Metric. <i>SIAM Journal on Control and Optimization</i> , 1993 , 31, 1518-1537	1.9	45
49	Stabilizability and Existence of System Representations for Discrete-Time Time-Varying Systems. <i>SIAM Journal on Control and Optimization</i> , 1993 , 31, 1538-1557	1.9	41
48	Linear Quadratic Optimal and Risk-Sensitive Control for Vehicle Active Suspensions. <i>IEEE Transactions on Control Systems Technology</i> , 2014 , 22, 543-556	4.8	38
47	The parallel projection operators of a nonlinear feedback system. <i>Systems and Control Letters</i> , 1993 , 20, 79-85	2.4	36
46	Passive suspensions for ride quality improvement of two-axle railway vehicles. <i>Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit</i> , 2015 , 229, 315-329	1.4	33
45	w-Stability of feedback systems. <i>Systems and Control Letters</i> , 1989 , 13, 271-277	2.4	30

44	The Inerter: A Retrospective. <i>Annual Review of Control, Robotics, and Autonomous Systems</i> , 2020 , 3, 361-391	3.1	29
43	Singular values and vectors of a class of Hankel operators. <i>Systems and Control Letters</i> , 1989 , 12, 301-308	3.4	27
42	A clipped-optimal control algorithm for semi-active vehicle suspensions: Theory and experimental evaluation. <i>Automatica</i> , 2015 , 53, 188-194	5.7	26
41	Series-Parallel Six-Element Synthesis of Biquadratic Impedances. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2012 , 59, 2543-2554	3.9	26
40	Electrical and Mechanical Passive Network Synthesis. <i>Lecture Notes in Control and Information Sciences</i> , 2008 , 35-50	0.5	26
39	Weighted sensitivity minimization: General plants in H_2 and rational weights. <i>Linear Algebra and Its Applications</i> , 1988 , 109, 71-90	0.9	26
38	A four-block problem for H_2 design: Properties and applications. <i>Automatica</i> , 1991 , 27, 811-818	5.7	23
37	Natural frequency assignment for mass-chain systems with inerters. <i>Mechanical Systems and Signal Processing</i> , 2018 , 108, 126-139	7.8	21
36	Robustness and Trade-offs in Repetitive Control. <i>Automatica</i> , 1998 , 34, 889-896	5.7	19
35	Bounded Disturbance Amplification for Mass Chains with Passive Interconnection. <i>IEEE Transactions on Automatic Control</i> , 2016 , 61, 1565-1574	5.9	17
34	On the Minimality and Uniqueness of the BottDuffin Realization Procedure. <i>IEEE Transactions on Automatic Control</i> , 2014 , 59, 1858-1873	5.9	15
33	Design of passive vehicle suspensions for maximal least damping ratio. <i>Vehicle System Dynamics</i> , 2016 , 54, 568-584	2.8	14
32	Power dissipation in automotive suspensions. <i>Vehicle System Dynamics</i> , 2011 , 49, 59-74	2.8	14
31	Experimental testing and modelling of a mechanical steering compensator 2008 ,		14
30	Robustness of a relaxation oscillator. <i>International Journal of Robust and Nonlinear Control</i> , 2000 , 10, 1005-1024	3.6	14
29	Well-Posedness of H^∞ Optimal Control Problems. <i>SIAM Journal on Control and Optimization</i> , 1990 , 28, 342-358	1.9	14
28	Feedback control and the arrow of time. <i>International Journal of Control</i> , 2010 , 83, 1325-1338	1.5	10
27	Flexible structure experiments at JPL and WPAFB: H_2 controller designs. <i>International Journal of Control</i> , 1993 , 58, 1-19	1.5	10

26	Designing robustly stabilising controllers for LTI spatially distributed systems using coprime factor synthesis. <i>Automatica</i> , 2003 , 39, 193-203	5.7	9
25	Controllability of linear passive network behaviors. <i>Systems and Control Letters</i> , 2017 , 101, 58-66	2.4	8
24	Nonlinear control for robust rejection of periodic disturbances. <i>Systems and Control Letters</i> , 2000 , 39, 97-107	2.4	8
23	Metric uncertainty and nonlinear feedback stabilization 1995 , 88-98		8
22	Robust Control of Feedback Systems with Combined Plant and Controller Uncertainty 1990 ,		8
21	On the theorem of Reichert. <i>Systems and Control Letters</i> , 2012 , 61, 1124-1131	2.4	7
20	A mechanical network approach to performance capabilities of passive suspensions 1997 ,		7
19	Identification of linear systems: A graph point of view 1992 ,		7
18	A Behavioral Approach to Play in Mechanical Networks. <i>SIAM Journal on Control and Optimization</i> , 2009 , 47, 2967-2990	1.9	6
17	Synthesis of positive-real functions with low-complexity series-parallel networks 2009 ,		6
16	Electrical Network Synthesis: A Survey of Recent Work. <i>Lecture Notes in Control and Information Sciences - Proceedings</i> , 2018 , 281-293	0.2	5
15	Linear systems and robustness: a graph point of view 1992 , 114-121		4
14	Continuity properties of LQG optimal controllers. <i>Systems and Control Letters</i> , 1995 , 26, 33-39	2.4	3
13	Topological approaches to robustness 1993 , 222-241		3
12	Stable adaptive regulation of Nth order plants 1985 ,		3
11	Regular Positive-Real Functions and the Classification of Transformerless Series-Parallel Networks. <i>Lecture Notes in Control and Information Sciences</i> , 2010 , 15-25	0.5	3
10	Principles of Lossless Adjustable One-Ports. <i>IEEE Transactions on Automatic Control</i> , 2020 , 65, 252-262	5.9	3
9	Power absorption invariance for brownian spring forcing 2012 ,		2

8	LQ optimal and risk-sensitive control for vehicle suspensions 2012 ,		2
7	Robust Stabilization in the Gap Metric: Controller Design for Distributed Plants 1990 ,		2
6	Multivariate root-locus behaviour and the relationship to transfer-function pole-zero structure This work was completed while the author was a research assistant at the University Engineering Department, Control and Management Systems Division, Mill Lane, Cambridge CB2 1RX, U.K.. <i>International Journal of Control</i> , 1986 , 43, 497-515	1.5	2
5	Weighted sensitivity minimization: General plants in H_∞ and rational weights 1987 ,		1
4	A new proof of Reichert's theorem 2016 ,		1
3	On a concept of genericity for RLC networks. <i>Systems and Control Letters</i> , 2019 , 134, 104562	2.4	0
2	Validated numerical methods for systems and control engineering. <i>SIGSAM Bulletin: A Quarterly Publication of the Special Interest Group on Symbolic & Algebraic Manipulation</i> , 2003 , 37, 72-73		
1	Robust Stabilization in the Gap Metric 1990 , 69-82		