

Stephen L Campbell

List of Publications by Year in descending order

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135
papers

3,526
citations

201674

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145
all docs

145
docs citations

145
times ranked

1010
citing authors

#	ARTICLE	IF	CITATIONS
1	Examination of solving optimal control problems with delays using GPOPS-â...; Numerical Algebra, Control and Optimization, 2021, 11, 283.	1.6	2
2	Invariant Subspaces, Derivative Arrays, and the Computation of the Drazin Inverse. Vietnam Journal of Mathematics, 2020, 48, 661-677.	0.8	2
3	Initial guess sensitivity in computational optimal control problems. Numerical Algebra, Control and Optimization, 2020, 10, 39-41.	1.6	6
4	Compose, OML, and Activate: A New Software Suite for Modeling and Simulation. , 2019, , .		2
5	Decentralized Observer-Based Reliable Control for a Class of Interconnected Markov Jumped Time-Delay System Subject to Actuator Saturation and Failure. Circuits, Systems, and Signal Processing, 2018, 37, 4728-4752.	2.0	9
6	Reliable H_2 control on saturated linear Markov jump system with uncertain transition rates and asynchronous jumped actuator failure. Journal of the Franklin Institute, 2018, 355, 3853-3872.	3.4	15
7	General Nonlinear Differential Algebraic Equations and Tracking Problems: A Robotics Example. Differential-algebraic Equations Forum, 2018, , 1-36.	0.6	2
8	Comment on solution of differential-algebraic equations through gradient flow embedding. Computers and Chemical Engineering, 2017, 106, 529-531.	3.8	0
9	Auxiliary signal design for failure detection with initial prior information. , 2016, , .		1
10	Actuator effects on auxiliary signal design for failure detection. , 2016, , .		1
11	Comments on direct transcription solution of DAE constrained optimal control problems with two discretization approaches. Numerical Algorithms, 2016, 73, 807-838.	1.9	6
12	Solving optimal control problems with control delays using direct transcription. Applied Numerical Mathematics, 2016, 108, 185-203.	2.1	15
13	Solving higher index DAE optimal control problems. Numerical Algebra, Control and Optimization, 2016, 6, 447-472.	1.6	10
14	Lobatto IIIA methods, direct transcription, and DAEs with delays. Numerical Algorithms, 2015, 69, 291-300.	1.9	7
15	Robust finite-time filtering for singular discrete-time stochastic systems. , 2015, , .		3
16	The Flexibility of DAE Formulations. Differential-algebraic Equations Forum, 2015, , 1-59.	0.6	1
17	Auxiliary signal design for failure detection in high index differential-algebraic equations. , 2014, , .		5
18	Asynchronous auxiliary signal design for failure detection. , 2014, , .		2

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19	Auxiliary signal design for failure detection in differential-algebraic equations. Numerical Algebra, Control and Optimization, 2014, 4, 151-179.	1.6	7
20	On the numerical treatment of linear-quadratic optimal control problems for general linear time-varying differential-algebraic equations. Journal of Computational and Applied Mathematics, 2013, 242, 213-231.	2.0	4
21	Observer Based Fault Detection and Identification in Differential Algebraic Equations. , 2013, , .		2
22	Direct Transcription Solution of Optimal Control Problems with Differential Algebraic Equations with Delays. , 2013, , .		3
23	Chapter 10: Optimal Control of a Delay PDE. , 2012, , 213-231.		4
24	Constructing observers for linear time varying DAEs. , 2012, , .		3
25	Active Robust Fault Detection in Closed-Loop Systems: Quadratic Optimization Approach. IEEE Transactions on Automatic Control, 2012, 57, 2532-2544.	5.7	60
26	Chapter 2: Regularization of Linear and Nonlinear Descriptor Systems. , 2012, , 17-36.		15
27	Chapter 1: DAEs, Control, and Optimization. , 2012, , 1-16.		2
28	A minimal norm corrected underdetermined Gauß-Newton procedure. Applied Numerical Mathematics, 2012, 62, 592-605.	2.1	8
29	Effects of feedback on active fault detection. Automatica, 2012, 48, 866-872.	5.0	44
30	Maximally reduced observers for linear time varying DAEs. , 2011, , .		8
31	Direct optimization determination of auxiliary test signals for linear problems with model uncertainty. , 2011, , .		8
32	Direct Transcription Solution of Optimal Control Problems with Control Delays. AIP Conference Proceedings, 2011, , .	0.4	1
33	Auxiliary signal design for robust active fault detection of linear discrete-time systems. Automatica, 2011, 47, 1887-1895.	5.0	33
34	Optimal control software for constrained nonlinear systems with delays. , 2011, , .		13
35	Full order observers for linear DAEs. , 2011, , .		9
36	Active incipient fault detection in continuous time systems with multiple simultaneous faults. Numerical Algebra, Control and Optimization, 2011, 1, 211-224.	1.6	4

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37	Modeling and Simulation in Scilab/Scicos with ScicosLab 4.4. , 2010, , .		36
38	Teaching Introductory Differential Equations with ScicosLab. CODEE Journal, 2010, 7, 1-12.	0.1	0
39	Asymptotic behavior and solution approximation of Active Robust fault detection for closed-loop systems. , 2009, , .		4
40	Completions of implicitly defined linear time varying vector fields. Linear Algebra and Its Applications, 2009, 431, 1422-1438.	0.9	15
41	Stability criteria for differential-algebraic equations with multiple delays and their numerical solutions. Applied Mathematics and Computation, 2009, 208, 397-415.	2.2	38
42	Completions of nonlinear DAE flows based on index reduction techniques and their stabilization. Journal of Computational and Applied Mathematics, 2009, 233, 1021-1034.	2.0	12
43	Active incipient fault detection with more than two simultaneous faults. , 2009, , .		4
44	Active Robust Fault Detection of Closed-Loop Systems: General Cost Cas. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 585-590.	0.4	3
45	Feedback in Active Fault Detection. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 192-196.	0.4	3
46	Modeling Viscoelastic Wall Properties of Ovine Arteries. , 2009, , .		1
47	Active incipient fault detection with two simultaneous faults. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 573-578.	0.4	3
48	Adjoint estimation using direct transcription multipliers: compressed trapezoidal method. Optimization and Engineering, 2008, 9, 291-305.	2.4	4
49	Active fault detection in nonlinear systems using auxiliary signals. , 2008, , .		37
50	Differential-algebraic equations. Scholarpedia Journal, 2008, 3, 2849.	0.3	5
51	Direct transcription solution of high index optimal control problems and regular Eulerâ€™Lagrange equations. Journal of Computational and Applied Mathematics, 2007, 202, 186-202.	2.0	14
52	The additional dynamics of least squares completions for linear differential algebraic equations. Linear Algebra and Its Applications, 2007, 425, 471-485.	0.9	10
53	Modelâ€™Based Failure Detection on Nonlinear Systems: Theory and Transition. Naval Engineers Journal, 2007, 119, 93-107.	0.1	2
54	Differential-Algebraic Equations. Oberwolfach Reports, 2007, 3, 1077-1168.	0.0	2

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55	Auxiliary signal design for active failure detection in uncertain linear systems with a priori information. <i>Automatica</i> , 2006, 42, 219-228.	5.0	65
56	Auxiliary Signal Design for Failure Detection. , 2004, , .		114
57	Numerically constructible observers for linear time-varying descriptor systems. <i>Automatica</i> , 2001, 37, 445-452.	5.0	14
58	Rapid Model Selection and the Separability Index. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 1151-1156.	0.4	11
59	On singular equilibria of index-1 DAEs. <i>Circuits, Systems, and Signal Processing</i> , 2000, 19, 131-157.	2.0	27
60	Some comments on DAE theory for IRK methods and trajectory optimization. <i>Journal of Computational and Applied Mathematics</i> , 2000, 120, 109-131.	2.0	18
61	Compensating for order variation in mesh refinement for direct transcription methods. <i>Journal of Computational and Applied Mathematics</i> , 2000, 125, 147-158.	2.0	33
62	The Index of an Infinite Dimensional Implicit System. <i>Mathematical and Computer Modelling of Dynamical Systems</i> , 1999, 5, 18-42.	2.2	49
63	DAEs arising from traveling wave solutions of PDEs II. <i>Computers and Mathematics With Applications</i> , 1999, 37, 15-34.	2.7	19
64	Mixed symbolicâ€“numerical computations with general DAEs II: An applications case study. <i>Numerical Algorithms</i> , 1998, 19, 85-94.	1.9	10
65	Behavior of the nonunique terms in general DAE integrators. <i>Applied Numerical Mathematics</i> , 1998, 28, 209-226.	2.1	7
66	DAEs arising from traveling wave solutions of PDEs. <i>Journal of Computational and Applied Mathematics</i> , 1997, 82, 41-58.	2.0	33
67	Jacobian reuse in explicit integrators for higher index DAEs. <i>Applied Numerical Mathematics</i> , 1997, 25, 391-412.	2.1	8
68	Constraint preserving integrators for general nonlinear higher index DAEs. <i>Numerische Mathematik</i> , 1995, 69, 383-399.	1.9	33
69	The index of general nonlinear DAEs. <i>Numerische Mathematik</i> , 1995, 72, 173-196.	1.9	244
70	Linearization of DAEs along trajectories. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 1995, 46, 70-84.	1.4	47
71	Nonregular 2D descriptor delay systems. <i>IMA Journal of Mathematical Control and Information</i> , 1995, 12, 57-67.	1.7	12
72	High-Index Differential Algebraic Equations. <i>Mechanics Based Design of Structures and Machines</i> , 1995, 23, 199-222.	0.6	53

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73	Solvability of General Differential Algebraic Equations. SIAM Journal of Scientific Computing, 1995, 16, 257-270.	2.8	103
74	Progress on a general numerical method for nonlinear higher index DAEs II. Circuits, Systems, and Signal Processing, 1994, 13, 123-138.	2.0	17
75	Explicit formulae for completions of linear time varying singular systems of differential equations. Circuits, Systems, and Signal Processing, 1994, 13, 185-199.	2.0	6
76	Least squares completions for nonlinear differential algebraic equations. Numerische Mathematik, 1993, 65, 77-94.	1.9	42
77	Uniqueness of completions for linear time varying differential algebraic equations. Linear Algebra and Its Applications, 1992, 161, 55-67.	0.9	28
78	Observability of Linear Time-Varying Descriptor Systems. SIAM Journal on Matrix Analysis and Applications, 1991, 12, 484-496.	1.4	43
79	Duality, observability, and controllability for linear time-varying descriptor systems. Circuits, Systems, and Signal Processing, 1991, 10, 455-470.	2.0	78
80	Comments on 2-D descriptor systems. Automatica, 1991, 27, 189-192.	5.0	14
81	Differentiation of Constraints in Differential-Algebraic Equations— . Mechanics Based Design of Structures and Machines, 1991, 19, 19-39.	0.6	27
82	Convergence of BDF approximations for nonsolvable differential algebraic equations. Applied Numerical Mathematics, 1990, 6, 153-158.	2.1	0
83	The Numerical Solution of Singular Systems Arising in Control Problems. , 1989, , .		4
84	Distributional convergence of BDF approximations to solutions of descriptor systems. Circuits, Systems, and Signal Processing, 1989, 8, 261-265.	2.0	0
85	Control problem structure and the numerical solution of linear singular systems. Mathematics of Control, Signals, and Systems, 1988, 1, 73-87.	2.3	8
86	Comment on controlling generalized state-space (descriptor) systems. International Journal of Control, 1987, 46, 2229-2230.	1.9	13
87	Local realizations of time varying descriptor systems. , 1987, , .		5
88	A General Form for Solvable Linear Time Varying Singular Systems of Differential Equations. SIAM Journal on Mathematical Analysis, 1987, 18, 1101-1115.	1.9	112
89	Countability of Sets. American Mathematical Monthly, 1986, 93, 480-481.	0.3	4
90	Index two linear time varying singular systems of differential equations. Circuits, Systems, and Signal Processing, 1986, 5, 97-107.	2.0	8

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91	The Numerical Solution of Higher Index Linear Time Varying Singular Systems of Differential Equations. SIAM Journal on Scientific and Statistical Computing, 1985, 6, 334-348.	1.5	58
92	Review of polynomials and linear control systems, by Stephen Barnett. Linear Algebra and Its Applications, 1984, 61, 289-290.	0.9	0
93	Regularizations of linear time varying singular systems. Automatica, 1984, 20, 365-370.	5.0	28
94	Nonlinear time-varying generalized state-space systems: An overview. , 1984, , .		6
95	Consistent initial conditions for singular nonlinear systems. Circuits, Systems, and Signal Processing, 1983, 2, 45-55.	2.0	10
96	One canonical form for higher-index linear time-varying singular systems. Circuits, Systems, and Signal Processing, 1983, 2, 311-326.	2.0	25
97	The Drazin inverse and systems of second order linear differential equations. Linear and Multilinear Algebra, 1983, 14, 195-198.	1.0	70
98	Index Two Linear Time-Varying Singular Systems of Differential Equations. SIAM Journal on Algebraic and Discrete Methods, 1983, 4, 237-243.	0.8	18
99	Canonical Forms and Solvable Singular Systems of Differential Equations. SIAM Journal on Algebraic and Discrete Methods, 1983, 4, 517-521.	0.8	87
100	Internal stability of two dimensional systems. Linear and Multilinear Algebra, 1983, 14, 365-369.	1.0	2
101	Multiparameter singular systems: Nondissective approaches. , 1983, , .		1
102	A second order singular linear system arising in electric power systems analysis. International Journal of Systems Science, 1982, 13, 101-108.	5.5	27
103	On positive controllers and linear quadratic optimal control problems. International Journal of Control, 1982, 36, 885-888.	1.9	7
104	Nontrivial isometries on $\text{sp}(\hat{A})$. International Journal of Mathematics and Mathematical Sciences, 1982, 5, 257-261.	0.7	1
105	On an assumption guaranteeing boundary layer convergence of singularly perturbed systems. Automatica, 1981, 17, 645-646.	5.0	5
106	Order and the index of singular time-invariant linear systems. Systems and Control Letters, 1981, 1, 119-122.	2.3	12
107	Computing nonnegative rank factorizations. Linear Algebra and Its Applications, 1981, 35, 175-182.	0.9	22
108	A nonlinear system with singular vector field near equilibria. Applicable Analysis, 1981, 12, 57-71.	1.3	0

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109	Convergent regular splittings for nonnegative matrices. <i>Linear and Multilinear Algebra</i> , 1981, 10, 63-73.	1.0	2
110	Continuity of The Drazin inverse. <i>Linear and Multilinear Algebra</i> , 1980, 8, 265-268.	1.0	15
111	Singular linear systems of differential equations with delays. <i>Applicable Analysis</i> , 1980, 11, 129-136.	1.3	102
112	Isometries on L^p Spaces and Copies of l^p Shifts. <i>Proceedings of the American Mathematical Society</i> , 1979, 77, 198.	0.8	2
113	Singular Perturbation of Autonomous Linear Systems. <i>SIAM Journal on Mathematical Analysis</i> , 1979, 10, 542-551.	1.9	92
114	Limit behavior of solutions of singular difference equations. <i>Linear Algebra and Its Applications</i> , 1979, 23, 167-178.	0.9	13
115	Nonregular Singular Dynamic Leontief Systems. <i>Econometrica</i> , 1979, 47, 1565.	4.2	19
116	Weak Drazin inverses. <i>Linear Algebra and Its Applications</i> , 1978, 20, 167-178.	0.9	17
117	Singular perturbation of autonomous linear systems, II. <i>Journal of Differential Equations</i> , 1978, 29, 362-373.	2.2	27
118	Optimal control of discrete linear processes with quadratic cost. <i>International Journal of Systems Science</i> , 1978, 9, 841-847.	5.5	9
119	On the limit of a product of matrix exponentials. <i>Linear and Multilinear Algebra</i> , 1978, 6, 55-59.	1.0	3
120	Linear operators for which $\hat{T} - T$ and $T + \hat{T}$ commute. III. <i>Pacific Journal of Mathematics</i> , 1978, 76, 17-19.	0.5	8
121	Linear Systems of Differential Equations with Singular Coefficients. <i>SIAM Journal on Mathematical Analysis</i> , 1977, 8, 1057-1066.	1.9	20
122	On continuity of the Moore-Penrose and Drazin generalized inverses. <i>Linear Algebra and Its Applications</i> , 1977, 18, 53-57.	0.9	17
123	On asymptotic properties of several classes of operators. <i>Proceedings of the American Mathematical Society</i> , 1977, 66, 79-84.	0.8	2
124	Differentiation of the Drazin Inverse. <i>SIAM Journal on Applied Mathematics</i> , 1976, 30, 703-707.	1.8	15
125	The Drazin Inverse of an Infinite Matrix. <i>SIAM Journal on Applied Mathematics</i> , 1976, 31, 492-503.	1.8	10
126	Applications of the Drazin Inverse to Linear Systems of Differential Equations with Singular Constant Coefficients. <i>SIAM Journal on Applied Mathematics</i> , 1976, 31, 411-425.	1.8	221

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127	Optimal Control of Autonomous Linear Processes with Singular Matrices in the Quadratic Cost Functional. SIAM Journal on Control and Optimization, 1976, 14, 1092-1106.	2.1	27
128	Continuity properties of the Drazin pseudoinverse. Linear Algebra and Its Applications, 1975, 10, 77-83.	0.9	60
129	EP Operators and Generalized Inverses. Canadian Mathematical Bulletin, 1975, 18, 327-333.	0.5	37
130	Operator-valued inner functions analytic on the closed disc. II. Pacific Journal of Mathematics, 1975, 60, 37-49.	0.5	4
131	Linear operators for which $T^{\hat{}}T$ and $TT^{\hat{}}$ commute. II. Pacific Journal of Mathematics, 1974, 53, 355-361.	0.5	15
132	The exponential representation of operator valued, differentiable inner functions. Journal of Differential Equations, 1972, 12, 455-461.	2.2	3
133	Operator-valued inner functions analytic on the closed disc. Pacific Journal of Mathematics, 1972, 41, 57-62.	0.5	6
134	A comparison of optimal and suboptimal auxiliary signal design approaches for robust failure detection. , 0, , .		6
135	Eigenvalue placement in completions of DAES. Electronic Journal of Linear Algebra, 0, 26, .	0.6	3