

# Bill Goodwine

## List of Publications by Year in descending order

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53  
papers

836  
citations

758635

12  
h-index

676716

22  
g-index

53  
all docs

53  
docs citations

53  
times ranked

751  
citing authors

#	ARTICLE	IF	CITATIONS
1	Frequency Response and Transfer Functions of Large Self-Similar Networks. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2022, 144, .	0.9	1
2	Controllability and accessibility results for N-link horizontal planar manipulators with one unactuated joint. Automatica, 2021, 125, 109480.	3.0	8
3	Robust gait design for a compass gait biped on slippery surfaces. Robotics and Autonomous Systems, 2021, 140, 103762.	3.0	10
4	Robustness and efficiency insights from a mechanical coupling metric for ankle-actuated biped robots. Autonomous Robots, 2020, 44, 281-295.	3.2	8
5	Damage modeling and detection for a tree network using fractional-order calculus. Nonlinear Dynamics, 2020, 101, 875-891.	2.7	1
6	Isolation of Unactuation: An Energetic Approach to Derive Static Equilibria for Underactuated Mechanical Systems. , 2020, , .		0
7	Damage Identification for The Tree-like Network through Frequency-domain Modeling. IFAC-PapersOnLine, 2020, 53, 705-711.	0.5	1
8	Terrain-blind walking of planar underactuated bipeds via velocity decomposition-enhanced control. International Journal of Robotics Research, 2019, 38, 1307-1323.	5.8	20
9	Fractional- $\mathcal{PD}^{\mu}$ Controllers for Irrational Systems. , 2019, , .		0
10	Controllability and Accessibility Results for an $N$ -Link Horizontal Planar Pendubot. , 2019, , .		4
11	A Simple Approach on Global Control of a Class of Underactuated Mechanical Robotic Systems. , 2019, , .		4
12	Closed Form Time Response of an Infinite Tree of Mechanical Components Described by an Irrational Transfer Function. , 2019, , .		4
13	Fractional-order system identification for health monitoring. Nonlinear Dynamics, 2018, 92, 1317-1334.	2.7	24
14	Design and Experimental Validation of a Velocity Decomposition-Based Controller for Underactuated Planar Bipeds. IEEE Robotics and Automation Letters, 2018, 3, 1896-1903.	3.3	14
15	A Study of the Relationship between a Mechanical Coupling Metric and Gait Characteristics for an Ankle-Actuated Biped Robot. , 2018, , .		3
16	Fractional-Order Trajectory-Following Control for Two-Legged Dynamic Walking. , 2018, , .		1
17	Approximations for Implicitly-Defined Dynamics of Networks of Simple Mechanical Components. , 2018, , .		3
18	Implicit and fractional-derivative operators in infinite networks of integer-order components. Chaos, Solitons and Fractals, 2018, 114, 186-192.	2.5	9

#	ARTICLE	IF	CITATIONS
19	Bifurcations and symmetry in two optimal formation control problems for mobile robotic systems. <i>Robotica</i> , 2017, 35, 1712-1731.	1.3	0
20	Using a nonlinear mechanical control coupling metric for biped robot control and design. , 2017, , .		6
21	Using fractional-order differential equations for health monitoring of a system of cooperating robots. , 2016, , .		10
22	Fractional-order approximations to implicitly-defined operators for modeling and control of networked mechanical systems. , 2016, , .		2
23	A review of origami applications in mechanical engineering. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2016, 230, 2345-2362.	1.1	140
24	Towards some general results in bifurcations in optimal solutions for symmetric distributed robotic formation control. , 2015, , .		1
25	Symmetries and reduction for multi-agent control. , 2015, , .		3
26	Recent Results in Fractional-Order Modeling in Multi-Agent Systems and Linear Friction Welding. <i>IFAC-PapersOnLine</i> , 2015, 48, 380-381.	0.5	10
27	Modeling a multi-robot system with fractional-order differential equations. , 2014, , .		26
28	Fractional-order dynamics in a random, approximately scale-free network of agents. , 2014, , .		9
29	Compositional boundedness of solutions for symmetric nonautonomous control systems. , 2014, , .		2
30	Control of cyberphysical systems using passivity and dissipativity based methods. <i>European Journal of Control</i> , 2013, 19, 379-388.	1.6	85
31	Phase-Locked-Loop Adaptive-Optic Controller and Simulated Shear Layer Correction. <i>AIAA Journal</i> , 2013, 51, 2714-2726.	1.5	5
32	Multi-agent compositional stability exploiting system symmetries. <i>Automatica</i> , 2013, 49, 3158-3166.	3.0	20
33	Compositional stability of approximately symmetric systems: Initial results. , 2013, , .		3
34	Symmetry-Breaking in Bifurcations of Optimal Solutions for Coordinated Nonholonomic Robotic Control. , 2012, , .		2
35	Toward a Science of Cyber-Physical System Integration. <i>Proceedings of the IEEE</i> , 2012, 100, 29-44.	16.4	247
36	Fault-tolerant multiagent robotic formation control exploiting system symmetries. , 2011, , .		2

#	ARTICLE	IF	CITATIONS
37	Pancreas modelling by a deterministic optimisation method. International Journal of Data Mining and Bioinformatics, 2011, 5, 308.	0.1	0
38	Nonlinear disturbance decoupling for a nonholonomic mobile robotic manipulation platform. , 2010, , .		0
39	Multiagent coordination exploiting system symmetries. , 2010, , .		7
40	The effect of dynamic singularities on robotic control and design. , 2010, , .		8
41	Modeling of glucose transport in skeletal muscle. , 2010, , .		0
42	Bifurcations of optimal solutions for coordinated robotic systems: Numerical and homotopy methods. , 2010, , .		2
43	Nonholonomic and stratified robotic manipulation supplemented with fuzzy control: Theory and experiment. , 2010, , .		0
44	Bifurcations and symmetries of optimal solutions for distributed robotic systems. , 2009, , .		5
45	Pancreas Modeling from IVGTT Data Using a Deterministic Optimal Search Method. , 2009, , .		1
46	Intrinsic vector-valued symmetric form for simple mechanical control systems in the nonzero velocity setting. , 2008, , .		11
47	Motion Planning for Nonlinear Symmetric Distributed Robotic Formations. International Journal of Robotics Research, 2007, 26, 1025-1041.	5.8	22
48	Controllability of cross-flow heat exchangers. International Journal of Heat and Mass Transfer, 2004, 47, 913-924.	2.5	27
49	Flow-based control of temperature in long ducts. International Journal of Heat and Mass Transfer, 2004, 47, 4995-5009.	2.5	13
50	Reduction and non-linear controllability of symmetric distributed systems. International Journal of Control, 2003, 76, 1809-1822.	1.2	18
51	Vision-Based Control of a Mobile Base and On-Board Arm. International Journal of Robotics Research, 2003, 22, 677-698.	5.8	2
52	Feedback Stabilization of a Class of Unstable Nonholonomic Systems. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2002, 124, 221-230.	0.9	3
53	Controlling Unstable Rolling Phenomena. JVC/Journal of Vibration and Control, 2000, 6, 137-158.	1.5	29