

# Marwan A Simaan

## List of Publications by Year in descending order

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122  
papers

1,430  
citations

393982

19  
h-index

414034

32  
g-index

125  
all docs

125  
docs citations

125  
times ranked

844  
citing authors

#	ARTICLE	IF	CITATIONS
1	On the selection of leader in Stackelberg games with parameter uncertainty. International Journal of Systems Science, 2021, 52, 86-94.	3.7	2
2	Control of Left Ventricular Assist Devices. , 2021, , 327-338.		0
3	Use of Advanced Control Techniques with Virtual Rolling to Improve Threading of the Tandem Cold Mill. IEEE Transactions on Industry Applications, 2021, , 1-1.	3.3	0
4	Resilient Cooperative Voltage Control for Distribution Network with High Penetration Distributed Energy Resources. , 2020, , .		7
5	Control of Left Ventricular Assist Devices. , 2020, , 1-13.		0
6	Improving the Availability of Tandem Hot Metal Strip Rolling: The Use of Fault-Tolerant Techniques With Virtual Rolling. IEEE Industry Applications Magazine, 2019, 25, 66-76.	0.3	1
7	Decision-Making in Complex Dynamical Systems of Systems With One Opposing Subsystem. , 2019, , .		2
8	Distributed formation control with open-loop Nash strategy. Automatica, 2019, 106, 266-273.	3.0	25
9	Improved Threading of the Tandem Cold Mill Using Advanced Control Techniques with Virtual Rolling. , 2019, , .		2
10	Cooperative Design of Systems of Systems Against Attack on One Subsystem. , 2019, , .		1
11	Leader-Follower Controls in Systems with Two Controllers. , 2019, , .		1
12	A Real-Time Big Data Control-Theoretical Framework for Cyber-Physical-Human Systems. Springer Optimization and Its Applications, 2019, , 149-172.	0.6	2
13	Streamlining the Tandem Hot-Metal-Strip Mill: Threading Progress Stems from the Use of Advanced Control with Virtual Rolling. IEEE Industry Applications Magazine, 2018, 24, 35-44.	0.3	9
14	Competitive Interaction Design of Cooperative Systems Against Attacks. IEEE Transactions on Automatic Control, 2018, 63, 3159-3166.	3.6	82
15	Improving the Availability of Tandem Cold Metal Rolling by the Use of Fault-Tolerant Techniques with Virtual Rolling. , 2018, , .		3
16	Sampled Closed-Loop Control in Multi-Controller Multi-Objective Control Systems. , 2018, , .		3
17	SIMPE: A Simulation Platform for Multi-Player Pursuit-Evasion Problems. , 2018, , .		0
18	Cardiac function recovery using ejection fraction in the presence of a continuous flow left Ventricular Assist Device. , 2018, , .		0

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19	Distributed Scheduling and Cooperative Control for Charging of Electric Vehicles at Highway Service Stations. IEEE Transactions on Intelligent Transportation Systems, 2017, 18, 2713-2727.	4.7	93
20	A distributed cooperative load control approach for ancillary services in smart grid. , 2017, , .		0
21	Multi-pursuer pursuit-evasion games under parameters uncertainty: A Monte Carlo approach. , 2017, , .		6
22	Aortic valve dynamics and blood flow control in continuous flow left ventricular assist devices. , 2017, , .		2
23	IEEE <i>Access</i> Special Section Editorial: Innovations in Electrical and Computer Engineering Education. IEEE Access, 2017, 5, 12262-12264.	2.6	5
24	Use of fault-tolerant techniques with virtual rolling to improve the robustness to measurement faults in the control for tandem hot metal strip rolling. , 2017, , .		1
25	Cooperative, non-cooperative and greedy pursuers strategies in multi-player pursuit-evasion games. , 2017, , .		15
26	A system of systems approach to patient treatment with the Left Ventricular Assist Device. , 2017, , .		4
27	Use of advanced control with virtual rolling to improve the control of the threading of the tandem hot metal strip mill. , 2016, , .		2
28	Advanced control using virtual processing for threading a hot metal strip mill. , 2016, , .		1
29	Game theoretical designs of resilient cooperative systems. , 2015, , .		9
30	Reducing costs and saving energy in the tandem rolling of hot metal strip by the use of an advanced control method. , 2015, , .		0
31	Advanced Control to Reduce the Likelihood of Cobbles in the Tandem Rolling of Hot Metal Strip. IEEE Transactions on Industry Applications, 2015, 51, 4305-4312.	3.3	7
32	Nash strategies for pursuit-evasion differential games involving limited observations. IEEE Transactions on Aerospace and Electronic Systems, 2015, 51, 1347-1356.	2.6	44
33	A new method for detecting aortic valve dynamics during control of the rotary Left Ventricular Assist Device support. , 2014, , .		3
34	Control of the Tandem Hot Strip Mill Under Expanded Uncertainties and Disturbances. IEEE Transactions on Industry Applications, 2014, 50, 3086-3094.	3.3	5
35	Distributed game strategy design with application to multi-agent formation control. , 2014, , .		16
36	Scheduling and cooperative control of electric vehicles' charging at highway service stations. , 2014, , .		23

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37	Detection of aortic valve dynamics in bridge-to-recovery feedback control of the Left Ventricular Assist Device. , 2014, , .		0
38	Advanced control to reduce the likelihood of cobbles in the tandem rolling of hot metal strip. , 2014, , .		0
39	Robust design of cooperative systems against attacks. , 2014, , .		27
40	Modularized design for cooperative control and plug-and-play operation of networked heterogeneous systems. Automatica, 2014, 50, 2405-2414.	3.0	71
41	Successive frequency domain minimization for time delay estimation. Signal Processing, 2014, 98, 96-101.	2.1	0
42	Control of the tandem hot strip mill under expanded uncertainties and disturbances. , 2013, , .		0
43	An advanced control method for saving energy in the tandem rolling of hot metal strip. , 2013, , .		0
44	Improvement in Control of the Tandem Hot Strip Mill. IEEE Transactions on Industry Applications, 2013, 49, 1962-1970.	3.3	18
45	A Suction Detection System for Rotary Blood Pumps Based on the Lagrangian Support Vector Machine Algorithm. IEEE Journal of Biomedical and Health Informatics, 2013, 17, 654-663.	3.9	27
46	An Engineering Analysis of the Aortic Valve Dynamics in Patients with Rotary Left Ventricular Assist Devices. Journal of Healthcare Engineering, 2013, 4, 307-328.	1.1	15
47	Feedback control of a rotary left ventricular assist device supporting a failing cardiovascular system. , 2012, , .		7
48	An analytic solution to the optimal design of information structure and cooperative control in networked systems. , 2012, , .		5
49	A new control system for left ventricular assist devices based on patient-specific physiological demand. Inverse Problems in Science and Engineering, 2012, 20, 721-734.	1.2	20
50	Advanced Technique for Control of the Threading of a Tandem Hot-Metal-Strip Rolling Mill. IEEE Transactions on Industry Applications, 2012, 48, 1683-1691.	3.3	3
51	Control of tandem hot metal strip rolling processes using an improvement to the state dependent Riccati equation technique. , 2012, , .		7
52	Improvement in control of the tandem hot strip mill. , 2012, , .		2
53	Cooperative control for self-organizing microgrids and game strategies for optimal dispatch of distributed renewable generations. Energy Systems, 2012, 3, 23-60.	1.8	33
54	Detection of ventricular suction in an implantable rotary blood pump using support vector machines. , 2011, 2011, 3318-21.		7

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55	A Design of Entrapment Strategies for the Distributed Pursuit-Evasion Game. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 9334-9339.	0.4	2
56	The aortic valve dynamics role in the recovery treatments of patients with left ventricular assist devices. , 2011, 2011, 1339-42.		0
57	A new current-based control model of the combined cardiovascular and Rotary Left Ventricular Assist Device. , 2011, , .		11
58	Modern controller for improving product quality during threading of the tandem hot strip rolling mill. , 2011, , .		1
59	Tandem Cold Metal Rolling Mill Control. Advances in Industrial Control, 2011, , .	0.4	38
60	Controller for reducing excursions in tensions, thicknesses and looper positions during threading of a hot metal strip rolling process. , 2011, , .		0
61	Advanced Control: The Augmented SDRE Technique. Advances in Industrial Control, 2011, , 117-176.	0.4	1
62	Advanced Control. Advances in Industrial Control, 2011, , 85-115.	0.4	0
63	Conventional Control. Advances in Industrial Control, 2011, , 33-83.	0.4	0
64	Main Drives and Motors. Advances in Industrial Control, 2011, , 177-202.	0.4	0
65	A Method for Subsample Fetal Heart Rate Estimation Under Noisy Conditions. IEEE Transactions on Biomedical Engineering, 2010, 57, 875-883.	2.5	21
66	Quality improvement of tandem hot metal strip rolling using an augmented state-dependent Riccati equation technique. , 2010, , .		8
67	Controller for improving the quality of the tandem rolling of hot metal strip. , 2010, , .		17
68	An optimal control approach for determination of the heat loss coefficient in a domestic water heating system. , 2010, , .		0
69	A design of distributed nonzero-sum Nash strategies. , 2010, , .		11
70	An Initial Model for Control of a Tandem Hot Metal Strip Rolling Process. IEEE Transactions on Industry Applications, 2010, 46, 46-53.	3.3	26
71	A Useful Control Model for Tandem Hot Metal Strip Rolling. IEEE Transactions on Industry Applications, 2010, 46, 2251-2258.	3.3	49
72	A Control Method for Improvement in the Tandem Hot Metal Strip Rolling Process. , 2010, , .		4

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73	Progress in Development of a Control Model for a Tandem Hot Metal Strip Rolling Process. , 2009, , .		3
74	Inverse optimality of cooperative control for networked systems. , 2009, , .		12
75	A Dynamical State Space Representation and Performance Analysis of a Feedback-Controlled Rotary Left Ventricular Assist Device. IEEE Transactions on Control Systems Technology, 2009, 17, 15-28.	3.2	121
76	Rotary Heart Assist Devices. , 2009, , 1409-1422.		20
77	Control of a continuous tandem cold metal rolling process. Control Engineering Practice, 2008, 16, 1379-1390.	3.2	28
78	Probabilities of Pure Nash Equilibria in Matrix Games when the Payoff Entries of One Player Are Randomly Selected. Journal of Optimization Theory and Applications, 2008, 137, 401-410.	0.8	1
79	Competitive flow control in general multi-node multi-link communication networks. International Journal of Communication Systems, 2008, 21, 167-184.	1.6	4
80	Performance Prediction of a Percutaneous Ventricular Assist System Using Nonlinear Circuit Analysis Techniques. IEEE Transactions on Biomedical Engineering, 2008, 55, 419-429.	2.5	16
81	Optimal control of continuous tandem cold metal rolling. , 2008, , .		3
82	Modeling and control of the heart left ventricle supported with a rotary assist device. , 2008, , .		2
83	Near-Nash targeting strategies for heterogeneous teams of autonomous combat vehicles. , 2008, , .		3
84	Optimal Control of Tandem Cold Rolling Using A Pointwise Linear Quadratic Technique With Trims. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2008, 130, .	0.9	17
85	Model for Control of a Tandem Hot Metal Strip Rolling Process. , 2008, , .		2
86	Optimum Feedback Controller Design for Tandem Cold Metal Rolling. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 988-993.	0.4	9
87	An Optimal Control Method for Improvement in Tandem Cold Metal Rolling. Conference Record - IAS Annual Meeting (IEEE Industry Applications Society), 2007, , .	0.0	6
88	A Nonlinear Model for Flow Estimation and Control in a Percutaneous Heart Assist System. Proceedings of the American Control Conference, 2007, , .	0.0	0
89	A New Strategy for Control of Tandem Cold Metal Rolling. Proceedings of the American Control Conference, 2007, , .	0.0	9
90	Flow Control in Communication Networks with Competing Teams of Cooperative Users. , 2007, , .		0

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91	Effectiveness of the Nash strategies in competitive multi-team target assignment problems. IEEE Transactions on Aerospace and Electronic Systems, 2007, 43, 126-134.	2.6	21
92	A Novel Approach for Optimal Control of Continuous Tandem Cold Metal Rolling. Conference Record - IAS Annual Meeting (IEEE Industry Applications Society), 2007, , .	0.0	6
93	Towards the Development of a Pediatric Ventricular Assist Device. Cell Transplantation, 2006, 15, 69-74.	1.2	9
94	A flow and routing control policy for communication networks with multiple competitive users. Journal of the Franklin Institute, 2006, 343, 168-180.	1.9	12
95	The PediaFlow <sup>®</sup> , <sup>©</sup> Pediatric Ventricular Assist Device. Pediatric Cardiac Surgery Annual, 2006, 9, 92-98.	0.5	18
96	Automatic decomposition of time series into step, ramp, and impulse primitives. Pattern Recognition, 2006, 39, 2166-2174.	5.1	10
97	A discriminant-analysis-based suction detection system for rotary blood pumps. , 2006, 2006, 5382-5.		25
98	Feedback Control of an LVAD Supporting a Failing Cardiovascular System Regulated by the Baroreflex. , 2006, , .		2
99	A Dynamical State Space Representation and Performance Analysis of a Feedback Controlled Rotary Left Ventricular Assist Device. , 2005, , 617.		9
100	Non-inferior Nash strategies for routing control in parallel-link communication networks. International Journal of Communication Systems, 2005, 18, 347-361.	1.6	9
101	Near-Nash Strategies in Competitive Multi-Team Target Assignment. , 2005, , 213.		2
102	In Vitro Evaluation of Multiobjective Hemodynamic Control of a Heart-Assist Pump. ASAIO Journal, 2005, 51, 329-335.	0.9	24
103	Noninferior Nash Strategies for Multi-Team Systems. Journal of Optimization Theory and Applications, 2004, 120, 29-51.	0.8	30
104	An application of dynamic Nash task assignment strategies to multi-team military air operations. Automatica, 2003, 39, 1469-1478.	3.0	29
105	Hybrid Intelligent Control for Ship Steering. Intelligent Automation and Soft Computing, 2003, 9, 245-258.	1.6	0
106	Minimally invasive estimation of systemic vascular parameters for artificial heart control. Control Engineering Practice, 2002, 10, 277-285.	3.2	8
107	Stochastic Discrete-Time Nash Games with Constrained State Estimators. Journal of Optimization Theory and Applications, 2002, 114, 171-188.	0.8	14
108	Minimally Invasive Estimation of Systemic Vascular Parameters. Annals of Biomedical Engineering, 2001, 29, 595-606.	1.3	24

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109	Market monitoring and control of ancillary services. Decision Support Systems, 2001, 30, 255-267.	3.5	6
110	Pressure-Volume Relationship of a Pulsatile Blood Pump for Ventricular Assist Device Development. ASAIO Journal, 2001, 47, 293-301.	0.9	13
111	Ordinal Games and Generalized Nash and Stackelberg Solutions. Journal of Optimization Theory and Applications, 2000, 107, 205-222.	0.8	28
112	Minimally invasive estimation of systemic vascular parameters. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1999, 32, 4313-4318.	0.4	2
113	Quantitative measurement of texture orientation in biomedical images using an artificial neural network. International Journal of Imaging Systems and Technology, 1998, 9, 351-355.	2.7	0
114	Multi-scale deconvolution of sensor array signals. Signal Processing, 1997, 57, 35-42.	2.1	8
115	Two-point boundary temperature control of hot strip via water cooling. ISA Transactions, 1997, 36, 11-20.	3.1	14
116	APPROXIMATE TIME OPTIMAL CONTROL OF DC SERVOS WITH UNKNOWN LOAD AND NON-LINEAR FRICTION TORQUE. Optimal Control Applications and Methods, 1995, 16, 361-371.	1.3	0
117	Knowledge-based computer system for segmentation of seismic sections based on texture. , 1991, , .		8
118	Special cause management: A knowledge-based approach to statistical process control. Annals of Mathematics and Artificial Intelligence, 1990, 2, 21-37.	0.9	2
119	A Knowledge-Based System for the Detection and Diagnosis of Out-of-Control Events in Manufacturing Processes. , 1989, , .		7
120	Multiple target tracking using sensor arrays. , 1987, , .		0
121	A Frequency-Domain Method for Time-Shift Estimation and Alignment of Seismic Signals. IEEE Transactions on Geoscience and Remote Sensing, 1985, GE-23, 132-138.	2.7	17
122	Optimum Monopolist Control in a Dynamic Market. IEEE Transactions on Systems, Man, and Cybernetics, 1976, SMC-6, 799-807.	0.9	9