Marwan A Simaan

List of Publications by Year
in descending order

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	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
2	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
3	Competitive Interaction Design of Cooperative Systems Against Attacks. IEEE Transactions on Automatic Control, 2018, 63, 3159-3166.	3.6	82
4	Modularized design for cooperative control and plug-and-play operation of networked heterogeneous systems. Automatica, 2014, 50, 2405-2414.	3.0	71
5	A Useful Control Model for Tandem Hot Metal Strip Rolling. IEEE Transactions on Industry Applications, 2010, 46, 2251-2258.	3.3	49
6	Nash strategies for pursuit-evasion differential games involving limited observations. IEEE Transactions on Aerospace and Electronic Systems, 2015, 51, 1347-1356.	2.6	44
7	Tandem Cold Metal Rolling Mill Control. Advances in Industrial Control, 2011, , .	0.4	38
8	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
9	Noninferior Nash Strategies for Multi-Team Systems. Journal of Optimization Theory and Applications, 2004, 120, 29-51.	0.8	30
10	An application of dynamic Nash task assignment strategies to multi-team military air operations. Automatica, 2003, 39, 1469-1478.	3.0	29
11	Ordinal Games and Generalized Nash and Stackelberg Solutions. Journal of Optimization Theory and Applications, 2000, 107, 205-222.	0.8	28
12	Control of a continuous tandem cold metal rolling process. Control Engineering Practice, 2008, 16, 1379-1390.	3.2	28
13	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
14	Robust design of cooperative systems against attacks. , 2014, , .		27
15	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
16	A discriminant-analysis-based suction detection system for rotary blood pumps. , 2006, 2006, 5382-5.		25
17	Distributed formation control with open-loop Nash strategy. Automatica, 2019, 106, 266-273.	3.0	25
18	Minimally Invasive Estimation of Systemic Vascular Parameters. Annals of Biomedical Engineering, 2001, 29, 595-606.	1.3	24

#	Article	IF	Citations
19	In Vitro Evaluation of Multiobjective Hemodynamic Control of a Heart-Assist Pump. ASAIO Journal, 2005, 51, 329-335.	0.9	24
20	Scheduling and cooperative control of electric vehicles' charging at highway service stations. , 2014, , .		23
21	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
22	A Method for Subsample Fetal Heart Rate Estimation Under Noisy Conditions. IEEE Transactions on Biomedical Engineering, 2010, 57, 875-883.	2.5	21
23	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
24	Rotary Heart Assist Devices. , 2009, , 1409-1422.		20
25	The PediaFlowâ„¢ Pediatric Ventricular Assist Device. Pediatric Cardiac Surgery Annual, 2006, 9, 92-98.	0.5	18
26	Improvement in Control of the Tandem Hot Strip Mill. IEEE Transactions on Industry Applications, 2013, 49, 1962-1970.	3.3	18
27	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
28	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
29	Controller for improving the quality of the tandem rolling of hot metal strip. , 2010, , .		17
30	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
31	Distributed game strategy design with application to multi-agent formation control. , 2014, , .		16
32	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
33	Cooperative, non-cooperative and greedy pursuers strategies in multi-player pursuit-evasion games. , 2017, , .		15
34	Two-point boundary temperature control of hot strip via water cooling. ISA Transactions, 1997, 36, 11-20.	3.1	14
35	Stochastic Discrete-Time Nash Games with Constrained State Estimators. Journal of Optimization Theory and Applications, 2002, 114, 171-188.	0.8	14
36	Pressure-Volume Relationship of a Pulsatile Blood Pump for Ventricular Assist Device Development. ASAIO Journal, 2001, 47, 293-301.	0.9	13

#	Article	IF	Citations
37	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
38	Inverse optimality of cooperative control for networked systems. , 2009, , .		12
39	A design of distributed nonzero-sum Nash strategies. , 2010, , .		11
40	A new current-based control model of the combined cardiovascular and Rotary Left Ventricular Assist Device. , 2011, , .		11
41	Automatic decomposition of time series into step, ramp, and impulse primitives. Pattern Recognition, 2006, 39, 2166-2174.	5.1	10
42	Optimum Monopolist Control in a Dynamic Market. IEEE Transactions on Systems, Man, and Cybernetics, 1976, SMC-6, 799-807.	0.9	9
43	A Dynamical State Space Representation and Performance Analysis of a Feedback Controlled Rotary Left Ventricular Assist Device. , 2005, , 617.		9
44	Non-inferior Nash strategies for routing control in parallel-link communication networks. International Journal of Communication Systems, 2005, 18, 347-361.	1.6	9
45	Towards the Development of a Pediatric Ventricular Assist Device. Cell Transplantation, 2006, 15, 69-74.	1.2	9
46	A New Strategy for Control of Tandem Cold Metal Rolling. Proceedings of the American Control Conference, 2007, , .	0.0	9
47	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
48	Game theoretical designs of resilient cooperative systems. , 2015, , .		9
49	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
50	Multi-scale deconvolution of sensor array signals. Signal Processing, 1997, 57, 35-42.	2.1	8
51	Minimally invasive estimation of systemic vascular parameters for artificial heart control. Control Engineering Practice, 2002, 10, 277-285.	3.2	8
52	Quality improvement of tandem hot metal strip rolling using an augmented state-dependent Riccati equation technique. , 2010, , .		8
53	Knowledgeâ€based computer system for segmentation of seismic sections based on texture. , 1991, , .		8
54	Detection of ventricular suction in an implantable rotary blood pump using support vector machines. , 2011, 2011, 3318-21.		7

#	ARTICLE	IF	CITATIONS
55	Feedback control of a rotary left ventricular assist device supporting a failing cardiovascular system. , 2012, , .		7
56	Control of tandem hot metal strip rolling processes using an improvement to the state dependent Riccati equation technique. , 2012, , .		7
57	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
58	A Knowledge-Based System for the Detection and Diagnosis of Out-of-Control Events in Manufacturing Processes. , 1989, , .		7
59	Resilient Cooperative Voltage Control for Distribution Network with High Penetration Distributed Energy Resources. , 2020, , .		7
60	Market monitoring and control of ancillary services. Decision Support Systems, 2001, 30, 255-267.	3.5	6
61	An Optimal Control Method for Improvement in Tandem Cold Metal Rolling. Conference Record - IAS Annual Meeting (IEEE Industry Applications Society), 2007, , .	0.0	6
62	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
63	Multi-pursuer pursuit-evasion games under parameters uncertainty: A Monte Carlo approach. , 2017, , .		6
64	An analytic solution to the optimal design of information structure and cooperative control in networked systems. , 2012, , .		5
65	Control of the Tandem Hot Strip Mill Under Expanded Uncertainties and Disturbances. IEEE Transactions on Industry Applications, 2014, 50, 3086-3094.	3.3	5
66	IEEE <italic>Access</italic> Special Section Editorial: Innovations in Electrical and Computer Engineering Education. IEEE Access, 2017, 5, 12262-12264.	2.6	5
67	Competitive flow control in general multi-node multi-link communication networks. International Journal of Communication Systems, 2008, 21, 167-184.	1.6	4
68	A Control Method for Improvement in the Tandem Hot Metal Strip Rolling Process. , 2010, , .		4
69	A system of systems approach to patient treatment with the Left Ventricular Assist Device. , 2017, , .		4
70	Optimal control of continuous tandem cold metal rolling. , 2008, , .		3
71	Near-Nash targeting strategies for heterogeneous teams of autonomous combat vehicles. , 2008, , .		3
72	Progress in Development of a Control Model for a Tandem Hot Metal Strip Rolling Process. , 2009, , .		3

#	Article	IF	Citations
73	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
74	A new method for detecting aortic valve dynamics during control of the rotary Left Ventricular Assist Device support. , 2014, , .		3
75	Improving the Availability of Tandem Cold Metal Rolling by the Use of Fault-Tolerant Techniques with Virtual Rolling. , 2018, , .		3
76	Sampled Closed-Loop Control in Multi-Controller Multi-Objective Control Systems. , 2018, , .		3
77	Special cause management: A knowledge-based approach to statistical process control. Annals of Mathematics and Artificial Intelligence, 1990, 2, 21-37.	0.9	2
78	Minimally invasive estimation of systemic vascular parameters. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1999, 32, 4313-4318.	0.4	2
79	Near-Nash Strategies in Competitive Multi-Team Target Assignment. , 2005, , 213.		2
80	Feedback Control of an LVAD Supporting a Failing Cardiovascular System Regulated by the Baroreflex. , 2006, , .		2
81	Modeling and control of the heart left ventricle supported with a rotary assist device. , 2008, , .		2
82	Model for Control of a Tandem Hot Metal Strip Rolling Process. , 2008, , .		2
83	A Design of Entrapment Strategies for the Distributed Pursuit-Evasion Gameâ€. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 9334-9339.	0.4	2
84	Improvement in control of the tandem hot strip mill. , 2012, , .		2
85	Use of advanced control with virtual rolling to improve the control of the threading of the tandem hot metal strip mill. , 2016, , .		2
86	Aortic valve dynamics and blood flow control in continuous flow left ventricular assist devices. , 2017, , .		2
87	Decision-Making in Complex Dynamical Systems of Systems With One Opposing Subsystem. , 2019, , .		2
88	Improved Threading of the Tandem Cold Mill Using Advanced Control Techniques with Virtual Rolling. , 2019, , .		2
89	On the selection of leader in Stackelberg games with parameter uncertainty. International Journal of Systems Science, 2021, 52, 86-94.	3.7	2
90	A Real-Time Big Data Control-Theoretical Framework for Cyber-Physical-Human Systems. Springer Optimization and Its Applications, 2019, , 149-172.	0.6	2

#	Article	IF	Citations
91	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
92	Modern controller for improving product quality during threading of the tandem hot strip rolling mill. , 2011, , .		1
93	Advanced control using virtual processing for threading a hot metal strip mill. , 2016, , .		1
94	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
95	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
96	Cooperative Design of Systems of Systems Against Attack on One Subsystem. , 2019, , .		1
97	Leader-Follower Controls in Systems with Two Controllers. , 2019, , .		1
98	Advanced Control: The Augmented SDRE Technique. Advances in Industrial Control, 2011, , 117-176.	0.4	1
99	Multiple target tracking using sensor arrays. , 1987, , .		0
100	APPROXIMATE TIME OPTIMAL CONTROL OF DC SERVOS WITH UNKNOWN LOAD AND NONâ€LINEAR FRICTION TORQUE. Optimal Control Applications and Methods, 1995, 16, 361-371.	1.3	0
101	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
102	Hybrid Intelligent Control for Ship Steering. Intelligent Automation and Soft Computing, 2003, 9, 245-258.	1.6	0
103	A Nonlinear Model for Flow Estimation and Control in a Percutaneous Heart Assist System. Proceedings of the American Control Conference, 2007, , .	0.0	0
104	Flow Control in Communication Networks with Competing Teams of Cooperative Users. , 2007, , .		0
105	An optimal control approach for determination of the heat loss coefficient in a domestic water heating system. , 2010, , .		0
106	The aortic valve dynamics role in the recovery treatments of patients with left ventricular assist devices. , 2011, 2011, 1339-42.		0
107	Controller for reducing excursions in tensions, thicknesses and looper positions during threading of a hot metal strip rolling process. , 2011, , .		0
108	Control of the tandem hot strip mill under expanded uncertainties and disturbances. , 2013, , .		0

#	Article	IF	Citations
109	An advanced control method for saving energy in the tandem rolling of hot metal strip. , 2013, , .		0
110	Detection of aortic valve dynamics in bridge-to-recovery feedback control of the Left Ventricular Assist Device. , 2014, , .		0
111	Advanced control to reduce the likelihood of cobbles in the tandem rolling of hot metal strip. , 2014, , .		0
112	Successive frequency domain minimization for time delay estimation. Signal Processing, 2014, 98, 96-101.	2.1	0
113	Reducing costs and saving energy in the tandem rolling of hot metal strip by the use of an advanced control method. , 2015, , .		0
114	A distributed cooperative load control approach for ancillary services in smart grid. , 2017, , .		0
115	SIMPE: A Simulation Platform for Multi-Player Pursuit-Evasion Problems. , 2018, , .		0
116	Cardiac function recovery using ejection fraction in the presence of a continuous flow left Ventricular Assist Device. , 2018, , .		0
117	Control of Left Ventricular Assist Devices. , 2021, , 327-338.		0
118	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
119	Advanced Control. Advances in Industrial Control, 2011, , 85-115.	0.4	0
120	Conventional Control. Advances in Industrial Control, 2011, , 33-83.	0.4	0
121	Main Drives and Motors. Advances in Industrial Control, 2011, , 177-202.	0.4	0
122	Control of Left Ventricular Assist Devices. , 2020, , 1-13.		0