

Fernando Lobo Pereira

List of Publications by Year in descending order

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164
papers

1,613
citations

361296

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174
all docs

174
docs citations

174
times ranked

790
citing authors

#	ARTICLE	IF	CITATIONS
1	Crowd Motion Paradigm Modeled by a Bilevel Sweeping Control Problem. , 2022, 6, 385-390.		0
2	Feedback Maximum Principle for Ensemble Control of Local Continuity Equations: An Application to Supervised Machine Learning. , 2022, 6, 1046-1051.		7
3	Smart Disaster Risk Reduction and Emergency Management in the Built Environment. Structural Integrity, 2022, , 315-340.	0.8	1
4	Maximum Principle and Second-Order Optimality Conditions in Control Problems with Mixed Constraints. Axioms, 2022, 11, 40.	0.9	1
5	A Maximum Principle for a Time-Optimal Bilevel Sweeping Control Problem. Journal of Optimization Theory and Applications, 2022, 192, 1022-1051.	0.8	0
6	Optimal Control of Quantum Systems by Pontryagin Maximum Principle. U Porto Journal of Engineering, 2022, 8, 194-201.	0.2	4
7	Optimal Control of a Passive Particle Advected by a Lambâ€“Oseen (Viscous) Vortex. Computation, 2022, 10, 87.	1.0	3
8	Linear-Quadratic Problems of Optimal Control in the Space of Probabilities. , 2022, , 1-1.		3
9	An Indirect Method for Regular State-Constrained Optimal Control Problems in Flow Fields. IEEE Transactions on Automatic Control, 2021, 66, 787-793.	3.6	20
10	Optimal Impulsive Control Problems Motivated by Mechanical Systems With Vibrations and Blockable DOFs. , 2021, 5, 701-706.		0
11	Optimization of Controlled Free-Time Sweeping Processes with Applications to Marine Surface Vehicle Modeling. , 2021, , 1-1.		1
12	Roll Padding and WaveNet for Multivariate Time Series in Human Activity Recognition. Advances in Intelligent Systems and Computing, 2021, , 238-248.	0.5	1
13	A Regularization Approach to Analyze the Time-Optimal Motion of a Mobile Robot under State Constraints using Pontryaginâ€™s Maximum Principle. Procedia Computer Science, 2021, 186, 11-20.	1.2	5
14	Necessary Conditions of Optimality in the Gamkrelidze's Form for General Dynamic Control Systems with State and Mixed Constraints. , 2021, , .		0
15	A fully distributed method for distributed multiagent system in a microgrid. Energy Reports, 2021, 7, 2294-2301.	2.5	11
16	Optimal Control Problems in Drone Operations for Disaster Search and Rescue. Procedia Computer Science, 2021, 186, 78-86.	1.2	5
17	Explaining the definition of wholesale access prices in the Portuguese telecommunications industry. Journal of Dynamics and Games, 2021, .	0.6	0
18	Necessary Conditions of Optimality in the Gamkrelidzeâ€™s Form for State Constrained Problems With Differential Inclusion. , 2020, 4, 958-963.		4

#	ARTICLE	IF	CITATIONS
19	Regular path-constrained time-optimal control problems in three-dimensional flow fields. European Journal of Control, 2020, 56, 98-106.	1.6	25
20	Regular perturbations to the motion of a three-wheeled mobile robot with the front-wheel drive under restricted state variables. , 2020, , .		3
21	Trajectory Tracking for a Multicopter under a Quaternion Representation. IFAC-PapersOnLine, 2020, 53, 5731-5736.	0.5	2
22	Investigation of a perturbation method to solve essentially non-regular time-optimal control problems with state constraints. , 2020, , .		3
23	Direct numerical solution of a time-optimal state-constrained control problem in a flow. , 2020, , .		0
24	Investigation of Quasi-Optimal Motion of a Mobile Robot: the Maximum Principle Based Approach*. , 2020, , .		0
25	Time-Optimal Control Problem with State Constraints in a Time-Periodic Flow Field. Communications in Computer and Information Science, 2020, , 340-354.	0.4	3
26	Investigation of Conditions for Non-degeneracy and Normality in Control Problems with Equality and Inequality State Constraints. IFAC-PapersOnLine, 2020, 53, 6869-6874.	0.5	1
27	Necessary Conditions of Optimality for a Time-Optimal Bi-level Sweeping Control Problem. IFAC-PapersOnLine, 2020, 53, 6831-6836.	0.5	3
28	Model Predictive Control for Autonomous Underwater Vehicles. Procedia Computer Science, 2019, 150, 19-27.	1.2	5
29	A Generalized Filippov-like Existence Theorem for Optimal Control Problems with Constraints. Procedia Computer Science, 2019, 150, 478-487.	1.2	0
30	Blockchain and smart contracts for higher education registry in Brazil. International Journal of Network Management, 2019, 29, e2061.	1.4	65
31	Deep learning in exchange markets. Information Economics and Policy, 2019, 47, 38-51.	1.7	18
32	A Framework for the Control of Bilevel Sweeping Processes. , 2019, , .		3
33	Path-constrained trajectory time-optimization in a three-dimensional steady flow field. , 2019, , .		6
34	A Framework for the Sustainable Control and Optimization of Resources in Agriculture. , 2019, , .		0
35	Impulsive Control Problems with State Constraints. Lecture Notes in Control and Information Sciences, 2019, , 99-119.	0.6	0
36	Optimal Impulsive Control. Lecture Notes in Control and Information Sciences, 2019, , .	0.6	10

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37	Nonlinear Analysis and Optimization. Journal of Optimization Theory and Applications, 2019, 180, 1-4.	0.8	10
38	On a Few Questions Regarding the Study of State-Constrained Problems in Optimal Control. Journal of Optimization Theory and Applications, 2019, 180, 235-255.	0.8	25
39	Impulsive Control Problems Under Borel Measurability. Lecture Notes in Control and Information Sciences, 2019, , 19-38.	0.6	0
40	Impulsive Control Problems Without the Frobenius Condition. Lecture Notes in Control and Information Sciences, 2019, , 75-97.	0.6	0
41	General Nonlinear Impulsive Control Problems. Lecture Notes in Control and Information Sciences, 2019, , 153-172.	0.6	0
42	Impulsive Control Problems Under the Frobenius Condition. Lecture Notes in Control and Information Sciences, 2019, , 39-74.	0.6	0
43	A Robust Reach Set MPC Scheme for Control of AUVs. Advances in Intelligent Systems and Computing, 2018, , 213-224.	0.5	2
44	Obstacle Avoidance Framework Based on Reach Sets. Advances in Intelligent Systems and Computing, 2018, , 768-779.	0.5	0
45	Maximum Principle for the Optimal Control of the Obukhov Model. , 2018, , .		0
46	A Recursive Algorithm Based on the Maximum Principle of Pontryagin. , 2018, , .		0
47	Cooperative Human-Machine Interaction in Industrial Environments. , 2018, , .		5
48	A remark on the continuity of the measure Lagrange multiplier in state constrained optimal control problems. , 2018, , .		3
49	Attainable-Set Model Predictive Control for AUV Formation Control. , 2018, , .		2
50	Optimal Control Framework for AUV's Motion Planning in Planar Vortices Vector Field. , 2018, , .		2
51	A General Attainable-Set Model Predictive Control Scheme. Application to AUV Operations. IFAC-PapersOnLine, 2018, 51, 314-319.	0.5	3
52	An indirect numerical method for a time-optimal state-constrained control problem in a steady two-dimensional fluid flow. , 2018, , .		10
53	A Model Predictive Control Scheme for Autonomous Underwater Vehicle Formation Control. , 2018, , .		4
54	A Short Survey on Measure-Driven Optimal Control Problems. , 2018, , .		1

#	ARTICLE	IF	CITATIONS
55	Second-Order Necessary Optimality Conditions in Optimal Impulsive Control Problems. Differential Equations, 2018, 54, 1083-1101.	0.1	2
56	Optimal Rendezvous Trajectory for Unmanned Aerial-Ground Vehicles. IEEE Transactions on Aerospace and Electronic Systems, 2018, 54, 834-847.	2.6	58
57	Investigation of Controllability and Regularity Conditions for State Constrained Problems. * This publication was supported by the Russian Foundation for Basic Research, project no. 16-31-60005, and by the Ministry of Education and Science of the Russian Federation (Agreement number 02.a03.21.0008) Tj ETQq1_1 0.784314 rgBT / 0.5 10 support of the Russian Science Foundation (project no. 17-11-01168). The third author also acknowledges the support. IFAC-PapersOnLine, 2017, 50, 6295-6302.	0.5	14
58	Optimal Multi-process Control of a Two Vortex Driven Particle in the Plane. IFAC-PapersOnLine, 2017, 50, 2193-2198.	0.5	9
59	Optimal power consumption motion control of a fish-like vehicle in a vortices vector field. , 2017, , .		3
60	Investigation of second-order optimality conditions for impulsive control problems under the Frobenius condition. , 2017, , .		1
61	Minimax optimal control problem with state constraints. European Journal of Control, 2016, 32, 24-31.	1.6	6
62	A moving path following approach for trajectory optimization of UAVs: An application for target tracking of marine vehicles. , 2016, , .		1
63	Investigation of regularity conditions in optimal control problems with geometric mixed constraints. Optimization, 2016, 65, 185-206.	1.0	14
64	Conditions for the absence of jumps of the solution to the adjoint system of the maximum principle for optimal control problems with state constraints. Proceedings of the Steklov Institute of Mathematics, 2016, 292, 27-35.	0.1	5
65	A new approach to the Pontryagin maximum principle for nonlinear fractional optimal control problems. Mathematical Methods in the Applied Sciences, 2016, 39, 3640-3649.	1.2	47
66	A Predictive Path-Following Approach for Fixed-Wing Unmanned Aerial Vehicles in Presence of Wind Disturbances. Advances in Intelligent Systems and Computing, 2016, , 623-634.	0.5	19
67	Adaptive Sampling Using an Unsupervised Learning of GMMs Applied to a Fleet of AUVs with CTD Measurements. Advances in Intelligent Systems and Computing, 2016, , 321-332.	0.5	2
68	On the properness of an impulsive control extension of dynamic optimization problems. ESAIM - Control, Optimisation and Calculus of Variations, 2015, 21, 857-875.	0.7	26
69	A Model Predictive Control Approach to AUVs Motion Coordination. Lecture Notes in Control and Information Sciences, 2015, , 9-18.	0.6	3
70	An Optimization-Based Framework for Impulsive Control Systems. Lecture Notes in Control and Information Sciences, 2015, , 277-300.	0.6	4
71	Developments in Model-Based Optimization and Control. Lecture Notes in Control and Information Sciences, 2015, , .	0.6	3
72	Predictive Control for Path-Following. From Trajectory Generation to the Parametrization of the Discrete Tracking Sequences. Lecture Notes in Control and Information Sciences, 2015, , 161-181.	0.6	11

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73	A Model Predictive Control-Based Architecture for Cooperative Path-Following of Multiple Unmanned Aerial Vehicles. Lecture Notes in Control and Information Sciences, 2015, , 141-160.	0.6	9
74	State Constraints in Impulsive Control Problems: Gamkrelidze-Like Conditions of Optimality. Journal of Optimization Theory and Applications, 2015, 166, 440-459.	0.8	8
75	On the solvability of implicit differential inclusions. Applicable Analysis, 2015, 94, 129-143.	0.6	12
76	On the Optimal Control of Flow Driven Dynamic Systems. CIM Series in Mathematical Sciences, 2015, , 183-189.	0.4	0
77	Reachability analysis of dynamic programming based controlled systems: An extended algorithm. , 2014, , .		0
78	On properness of impulsive extension. , 2014, , .		0
79	On some extension of optimal control theory. European Journal of Control, 2014, 20, 284-291.	1.6	19
80	Application of covering mappings to constrained dynamic systems and differential inclusions. , 2014, , .		0
81	Autonomous Simultaneous Localization and Mapping driven by Monte Carlo uncertainty maps-based navigation. Knowledge Engineering Review, 2013, 28, 35-57.	2.1	6
82	Underwater plume tracing with an AUV cooperative navigation scheme based on the simplex algorithm. , 2013, , .		0
83	Herbicide Dosage Optimization Model for Weed Control Using the Resistance Dynamics. , 2013, , .		0
84	An underwater cooperative navigation scheme. , 2013, , .		1
85	Reachability analysis of dynamic programming based controlled systems. , 2013, , .		1
86	Optimal Control of Particle Advection in Couette and Poiseuille Flows. Conference Papers in Mathematics, 2013, 2013, 1-4.	0.5	1
87	An Optimal Control Framework for Resources Management in Agriculture. Conference Papers in Mathematics, 2013, 2013, 1-15.	0.5	4
88	High Level Architecture for Trading Agents in Betting Exchange Markets. Advances in Intelligent Systems and Computing, 2013, , 497-510.	0.5	0
89	Model Predictive Control of Impulsive Dynamical Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 305-310.	0.4	4
90	Experimental results with value function based control of an AUV. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 164-169.	0.4	2

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91	Hamilton-Jacobi-Bellman Equation and Feedback Synthesis for Impulsive Control. IEEE Transactions on Automatic Control, 2012, 57, 244-249.	3.6	28
92	Dynamic programming based feedback control for systems with switching costs. , 2012, , .		7
93	On the extension of classical calculus of variations and optimal control to problems with discontinuous trajectories. , 2012, , .		3
94	Pontryagin's maximum principle for constrained impulsive control problems. Nonlinear Analysis: Theory, Methods & Applications, 2012, 75, 1045-1057.	0.6	32
95	A Maximum Principle for Constrained Infinite Horizon Dynamic Control Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 10207-10212.	0.4	6
96	On a generalization of the impulsive control concept: Controlling system jumps. Discrete and Continuous Dynamical Systems, 2011, 29, 403-415.	0.5	27
97	R.V. Gamkrelidze's maximum principle for optimal control problems with bounded phase coordinates and its relation to other optimality conditions. Doklady Mathematics, 2011, 83, 131-135.	0.1	3
98	The Maximum Principle for Optimal Control Problems with State Constraints by R.V. Gamkrelidze: Revisited. Journal of Optimization Theory and Applications, 2011, 149, 474-493.	0.8	74
99	Necessary conditions of optimality for state constrained infinite horizon differential inclusions. , 2011, , .		3
100	A Maximum Principle for Infinite Time Asymptotically Stable Impulsive Dynamic Control Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 1326-1331.	0.4	0
101	Pontryagin's maximum principle for optimal impulsive control problems. Doklady Mathematics, 2010, 81, 418-421.	0.1	6
102	Maximum principle in problems with mixed constraints under weak assumptions of regularity. Optimization, 2010, 59, 1067-1083.	1.0	22
103	On constrained impulsive control problems. Journal of Mathematical Sciences, 2010, 165, 654-688.	0.1	25
104	SLAM algorithm applied to robotics assistance for navigation in unknown environments. Journal of NeuroEngineering and Rehabilitation, 2010, 7, 10.	2.4	18
105	Monte Carlo uncertainty maps-based for mobile robot autonomous SLAM navigation. , 2010, , .		6
106	Chemical plume source localization with multiple Autonomous Underwater Vehicles. , 2010, , .		3
107	Cooperative Autonomous Underwater Vehicle localization. , 2010, , .		4
108	New problems of optimal path coordination for multi-vehicle systems. , 2009, , .		3

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109	On linear and nonlinear tracking of the wheeled mobile robot. , 2009, , .		2
110	Necessary Optimality Conditions for Problems with Equality and Inequality Constraints: Abnormal Case. Journal of Optimization Theory and Applications, 2009, 140, 391-408.	0.8	6
111	Multiple UAV teams for multiple tasks. , 2009, , .		5
112	Portable control console for autonomous ocean-going vehicles. , 2009, , .		0
113	IMC: A communication protocol for networked vehicles and sensors. , 2009, , .		57
114	Large scale data collection using networks of heterogeneous vehicles and sensors. , 2009, , .		4
115	UAV and AUVs coordination for ocean exploration. , 2009, , .		34
116	Sensor systems on networked vehicles. Networks and Heterogeneous Media, 2009, 4, 223-247.	0.5	8
117	Invariance for impulsive control systems. Automation and Remote Control, 2008, 69, 788-800.	0.4	17
118	On the feedback control of impulsive dynamic systems. , 2008, , .		8
119	Video Summary - Neptus, Command and Control Infrastructure for Heterogeneous Teams of Autonomous Vehicles. , 2007, , .		1
120	An impulsive framework for the control of hybrid systems. , 2007, , .		6
121	Mapping and initial dilution estimation of an ocean outfall plume using an autonomous underwater vehicle. Continental Shelf Research, 2007, 27, 583-593.	0.9	25
122	Necessary conditions of optimality for impulsive control problems with state constraints. , 2007, , .		1
123	Mission Review and Analysis. , 2006, , .		3
124	Simultaneous Control, Navigation and Target Tracking for Robotic Formations. , 2006, , .		1
125	Second-Order Necessary Optimality Conditions for Problems Without A Priori Normality Assumptions. Mathematics of Operations Research, 2006, 31, 1-12.	0.8	16
126	Measure-controlled dynamic systems: Polyhedral approximation of their reachable set boundary. Automation and Remote Control, 2006, 67, 350-360.	0.4	11

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127	A set-valued framework for coordinated motion control of networked vehicles. Journal of Computer and Systems Sciences International, 2006, 45, 824-830.	0.2	0
128	AN IMPLEMENTATION OF A FRAMEWORK FOR COOPERATIVE ENGINEERING. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 25-30.	0.4	0
129	Necessary Conditions for Impulsive Nonlinear Optimal Control Problems without a priori Normality Assumptions. Journal of Optimization Theory and Applications, 2005, 124, 55-77.	0.8	30
130	Sewage outfall plume dispersion observations with an Autonomous Underwater Vehicle. Water Science and Technology, 2005, 52, 283-290.	1.2	6
131	A Nondegenerate Maximum Principle for the Impulse Control Problem with State Constraints. SIAM Journal on Control and Optimization, 2005, 43, 1812-1843.	1.1	47
132	Neptus - a framework to support multiple vehicle operation. , 2005, , .		44
133	A new ROV design: issues on low drag and mechanical symmetry. , 2005, , .		29
134	Coordinated Control of Networked Vehicles: An Autonomous Underwater System. Automation and Remote Control, 2004, 65, 1037-1045.	0.4	14
135	Lyapunov Stability of Measure Driven Impulsive Systems. Differential Equations, 2004, 40, 1122-1130.	0.1	11
136	Necessary optimality conditions for impulsive control problems *. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 2-12.	0.4	0
137	Hybrid maneuver for gradient search with multiple coordinated AUVs. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 233-238.	0.4	3
138	Second Order Necessary Conditions for Optimal Impulsive Control Problems. Journal of Dynamical and Control Systems, 2003, 9, 131-153.	0.4	23
139	Integrated maneuver and control design for ROV operations. , 2003, , .		8
140	Post mission trajectory smoothing for the Isurus AUV. , 2003, , .		7
141	User-assisted trajectory generation- of underwater vehicles. , 2003, , .		0
142	Modeling and control of the IES project ROV. , 2003, , .		7
143	A framework for e-cooperating business agents: An application to the (re)engineering of production facilities. , 2003, , 189-204.		2
144	Trajectory generation for a remotely operated vehicle. , 2003, , .		6

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145	Stability for impulsive control systems. <i>Dynamical Systems</i> , 2002, 17, 421-434.	0.2	24
146	Control Design for Autonomous Vehicles: A Dynamic Optimization Perspective. <i>European Journal of Control</i> , 2001, 7, 178-202.	1.6	15
147	A Differential Game with Graph Constrained Switching Strategies. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2001, 34, 887-891.	0.4	4
148	Hamilton-Jacobi Conditions for an Impulsive Control Problem. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2001, 34, 1297-1302.	0.4	2
149	Necessary conditions of optimality for vector-valued impulsive control problems. <i>Systems and Control Letters</i> , 2000, 40, 205-215.	1.3	74
150	On the receding horizon hierarchical optimal control of manufacturing systems. <i>Journal of Intelligent Manufacturing</i> , 1997, 8, 425-433.	4.4	7
151	Impulsive observation and control strategies in minimax problems. , 1997, , .		0
152	A Maximum Principle for Optimal Processes with Discontinuous Trajectories. <i>SIAM Journal on Control and Optimization</i> , 1988, 26, 205-229.	1.1	108
153	Necessary conditions for optimal control problems with discontinuous trajectories. <i>Journal of Economic Dynamics and Control</i> , 1986, 10, 115-118.	0.9	2
154	A Hierarchical Framework For The Optimal Flow Control In Manufacturing Systems. , 0, , .		13
155	An automatic path planing system for autonomous robotic vehicles. , 0, , .		7
156	A methodology for replanning collision free trajectories for a mobile robot. , 0, , .		2
157	Design of a mission management system for the autonomous underwater vehicle MARIUS. , 0, , .		10
158	A receding horizon strategy for the hierarchical control of manufacturing systems. , 0, , .		9
159	Localisation system for an autonomous mobile platform. , 0, , .		0
160	First and second order necessary conditions of optimality for impulsive control problems. , 0, , .		6
161	Invariance for impulsive control systems. , 0, , .		1
162	Motion Planning and Control of Coordinated Systems. , 0, , .		0

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163	Nondegenerate Necessary Conditions of Optimality for Problems Without Normality Assumptions. , 0, , .		0
164	Mission planning and specification in the Neptus framework. , 0, , .		39