

Chao Xu

List of Publications by Year in descending order

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361413

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93
all docs

93
docs citations

93
times ranked

918
citing authors

#	ARTICLE	IF	CITATIONS
1	D-type anticipatory iterative learning control for a class of inhomogeneous heat equations. <i>Automatica</i> , 2013, 49, 2397-2408.	5.0	143
2	Swarm of micro flying robots in the wild. <i>Science Robotics</i> , 2022, 7, eabm5954.	17.6	139
3	EGO-Planner: An ESDF-Free Gradient-Based Local Planner for Quadrotors. <i>IEEE Robotics and Automation Letters</i> , 2021, 6, 478-485.	5.1	121
4	Dense motion estimation of particle images via a convolutional neural network. <i>Experiments in Fluids</i> , 2019, 60, 1.	2.4	101
5	Particle Image Velocimetry Based on a Deep Learning Motion Estimator. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2020, 69, 3538-3554.	4.7	89
6	Geometrically Constrained Trajectory Optimization for Multicopters. <i>IEEE Transactions on Robotics</i> , 2022, 38, 3259-3278.	10.3	68
7	EGO-Swarm: A Fully Autonomous and Decentralized Quadrotor Swarm System in Cluttered Environments. , 2021, , .		57
8	Iterative learning control of inhomogeneous distributed parameter systemsâ€™frequency domain design and analysis. <i>Systems and Control Letters</i> , 2014, 72, 22-29.	2.3	54
9	Parameter estimation for nonlinear time-delay systems with noisy output measurements. <i>Automatica</i> , 2015, 60, 48-56.	5.0	53
10	Sequential linear quadratic control of bilinear parabolic PDEs based on POD model reduction. <i>Automatica</i> , 2011, 47, 418-426.	5.0	47
11	Fast and Stable Learning of Dynamical Systems Based on Extreme Learning Machine. <i>IEEE Transactions on Systems, Man, and Cybernetics: Systems</i> , 2019, 49, 1175-1185.	9.3	45
12	Stabilization of linearized 2D magnetohydrodynamic channel flow by backstepping boundary control. <i>Systems and Control Letters</i> , 2008, 57, 805-812.	2.3	43
13	Optimal boundary control for water hammer suppression in fluid transmission pipelines. <i>Computers and Mathematics With Applications</i> , 2015, 69, 275-290.	2.7	41
14	Stabilization of a second order ODEâ€™heat system coupling at intermediate point. <i>Automatica</i> , 2015, 60, 57-64.	5.0	39
15	Time optimal Zermeloâ€™s navigation problem with moving and fixed obstacles. <i>Applied Mathematics and Computation</i> , 2013, 224, 866-875.	2.2	35
16	Motion estimation under location uncertainty for turbulent fluid flows. <i>Experiments in Fluids</i> , 2018, 59, 1.	2.4	34
17	On Iterative Learning Control of parabolic distributed parameter systems. , 2009, , .		31
18	Water hammer mitigation via PDE-constrained optimization. <i>Control Engineering Practice</i> , 2015, 45, 54-63.	5.5	25

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19	Fast-Racing: An Open-Source Strong Baseline for $\mathcal{SE}(3)$ Planning in Autonomous Drone Racing. IEEE Robotics and Automation Letters, 2021, 6, 8631-8638.	5.1	23
20	Robust Control Design for the Poloidal Magnetic Flux Profile Evolution in the Presence of Model Uncertainties. IEEE Transactions on Plasma Science, 2010, 38, 375-382.	1.3	22
21	Alternating Minimization Based Trajectory Generation for Quadrotor Aggressive Flight. IEEE Robotics and Automation Letters, 2020, 5, 4836-4843.	5.1	21
22	TGK-Planner: An Efficient Topology Guided Kinodynamic Planner for Autonomous Quadrotors. IEEE Robotics and Automation Letters, 2021, 6, 494-501.	5.1	21
23	Medical service demand forecasting using a hybrid model based on ARIMA and self-adaptive filtering method. BMC Medical Informatics and Decision Making, 2020, 20, 237.	3.0	19
24	Autonomous and Adaptive Navigation for Terrestrial-Aerial Bimodal Vehicles. IEEE Robotics and Automation Letters, 2022, 7, 3008-3015.	5.1	19
25	Iterative learning control for MIMO second-order hyperbolic distributed parameter systems with uncertainties. Advances in Difference Equations, 2016, 2016, .	3.5	18
26	External Forces Resilient Safe Motion Planning for Quadrotor. IEEE Robotics and Automation Letters, 2021, 6, 8506-8513.	5.1	16
27	Stability analysis of neutral stochastic delay differential equations by a generalisation of Banach's contraction principle. International Journal of Control, 2017, 90, 1555-1560.	1.9	15
28	Attitude Maneuver Planning of Agile Satellites for Time Delay Integration Imaging. Journal of Guidance, Control, and Dynamics, 2020, 43, 46-59.	2.8	15
29	Dynamic optimization of open-loop input signals for ramp-up current profiles in tokamak plasmas. Communications in Nonlinear Science and Numerical Simulation, 2016, 32, 31-48.	3.3	14
30	Cantilever-based micro thrust measurement and pressure field distribution of biomimetic robot fish actuated by macro fiber composites (MFCs) actuators. Smart Materials and Structures, 2021, 30, 035001.	3.5	14
31	Micro thrust measurement experiment and pressure field evolution of bionic robotic fish with harmonic actuation of macro fiber composites. Mechanical Systems and Signal Processing, 2021, 153, 107538.	8.0	14
32	Generating Large-Scale Trajectories Efficiently using Double Descriptions of Polynomials. , 2021, , .		14
33	Visibility-aware Trajectory Optimization with Application to Aerial Tracking. , 2021, , .		14
34	Vibration Suppression of a High-Speed Macro-Micro Integrated System Using Computational Optimal Control. IEEE Transactions on Industrial Electronics, 2020, 67, 7841-7850.	7.9	13
35	FAST-Dynamic-Vision: Detection and Tracking Dynamic Objects with Event and Depth Sensing. , 2021, , .		13
36	Optimal tracking control of flow velocity in a one-dimensional magnetohydrodynamic flow. Engineering Optimization, 2019, 51, 1-21.	2.6	12

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37	Filtering enhanced tomographic PIV reconstruction based on deep neural networks. IET Cyber-Systems and Robotics, 2020, 2, 43-52.	1.8	12
38	Low-dimensional modeling of linear heat transfer systems using incremental the proper orthogonal decomposition method. Asia-Pacific Journal of Chemical Engineering, 2013, 8, 473-482.	1.5	11
39	Dynamic Illumination Optical Flow Computing for Sensing Multiple Mobile Robots From a Drone. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2018, 48, 1370-1382.	9.3	11
40	Boundary stabilization of a class of reaction-advection-diffusion systems via a gradient-based optimization approach. Journal of the Franklin Institute, 2019, 356, 173-195.	3.4	11
41	Sensor deployment for pipeline leakage detection via optimal boundary control strategies. Journal of Industrial and Management Optimization, 2015, 11, 199-216.	1.3	11
42	EVA-Planner: Environmental Adaptive Quadrotor Planning. , 2021, , .		11
43	Learning-based 3D Occupancy Prediction for Autonomous Navigation in Occluded Environments. , 2021, , .		11
44	Elastic Tracker: A Spatio-temporal Trajectory Planner for Flexible Aerial Tracking. , 2022, , .		11
45	Effects of actuator-substrate ratio on hydrodynamic and propulsion performances of underwater oscillating flexible structure actuated by macro fiber composites. Mechanical Systems and Signal Processing, 2022, 170, 108824.	8.0	10
46	Transport Parameter Estimations of Plasma Transport Dynamics Using the Extended Kalman Filter. IEEE Transactions on Plasma Science, 2010, 38, 359-364.	1.3	9
47	Computational bilinear optimal control for a class of one-dimensional MHD flow systems. ISA Transactions, 2019, 85, 129-140.	5.7	9
48	Mapless-Planner: A Robust and Fast Planning Framework for Aggressive Autonomous Flight without Map Fusion. , 2021, , .		8
49	Parameter Optimization of Reduced Fluid Model via Sparse Point Measurements. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 5201-5210.	9.3	7
50	Scheduling and Planning Framework for Time Delay Integration Imaging by Agile Satellite. IEEE Transactions on Aerospace and Electronic Systems, 2022, 58, 189-205.	4.7	7
51	Stabilization of a general linear heat-ODE system coupling at an intermediate point. International Journal of Robust and Nonlinear Control, 2017, 27, 3951-3970.	3.7	6
52	Hierarchical Decision and Control for Continuous Multitarget Problem: Policy Evaluation With Action Delay. IEEE Transactions on Neural Networks and Learning Systems, 2019, 30, 464-473.	11.3	6
53	Computational optimal control of the Saint-Venant PDE model using the time-scaling technique. Asia-Pacific Journal of Chemical Engineering, 2016, 11, 70-80.	1.5	5
54	Optimal Open-Loop Control for 2-D Colloid Transport in the Dead-End Microchannel. IEEE Transactions on Control Systems Technology, 2019, 27, 2757-2765.	5.2	5

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55	Backstepping Synthesis for Feedback Control of First-Order Hyperbolic PDEs with Spatial-Temporal Actuation. <i>Abstract and Applied Analysis</i> , 2014, 2014, 1-13.	0.7	4
56	Electricity-structure-fluid coupled modelling and experiment of underwater flexible structure with partially distributed macro fiber composites. <i>JVC/Journal of Vibration and Control</i> , 2022, 28, 290-303.	2.6	4
57	DeepPTV: Particle Tracking Velocimetry for Complex Flow Motion via Deep Neural Networks. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2022, 71, 1-16.	4.7	4
58	Stability and stabilization of a class of switched stochastic systems with saturation control. <i>Science China Information Sciences</i> , 2021, 64, 1.	4.3	4
59	Backstepping Boundary Stabilization of Linearized 2D Hartman Flow. <i>Proceedings of the American Control Conference</i> , 2007, , .	0.0	3
60	POD-based reduced order optimal control of parabolic PDE systems via diffusivity-interior-boundary actuation. , 2007, , .		3
61	Iterative design of suboptimal feedback control for bilinear parabolic PDE systems. , 2009, , .		3
62	Computing Open-Loop Optimal Control of the q -Profile in Ramp-Up Tokamak Plasmas Using the Minimal-Surface Theory. <i>Plasma Science and Technology</i> , 2013, 15, 403-410.	1.5	3
63	The approximation for the boundary optimal control problem of Burgers's Fisher equation with constraints. <i>Applied Mathematics and Computation</i> , 2014, 243, 889-898.	2.2	3
64	Learning hierarchical and efficient Person re-identification for robotic navigation. <i>International Journal of Intelligent Robotics and Applications</i> , 2021, 5, 104-118.	2.8	3
65	Computational optimal control of 1D colloid transport by solute gradients in dead-end micro-channels. <i>Journal of Industrial and Management Optimization</i> , 2018, 14, 1251-1269.	1.3	3
66	Iterative Learning Tracking Control of High-Speed Trains With Nonlinearly Parameterized Uncertainties and Multiple Time-Varying Delays. <i>IEEE Transactions on Intelligent Transportation Systems</i> , 2022, 23, 20476-20488.	8.0	3
67	Star-Convex Constrained Optimization for Visibility Planning with Application to Aerial Inspection. , 2022, , .		3
68	On recursive proper orthogonal decomposition via perturbation theory with applications to distributed sensing in cyber-physical systems. , 2010, , .		2
69	Path planning for underactuated Dubins micro-robots using switching control. , 2013, , .		2
70	Start-up phase plasma discharge design of a tokamak via control parameterization method. <i>Chinese Physics B</i> , 2015, 24, 035202.	1.4	2
71	Dynamic optimization of trajectory for ramp-up current profile in tokamak plasma. <i>Asia-Pacific Journal of Chemical Engineering</i> , 2016, 11, 918-929.	1.5	2
72	Control-oriented modeling of colloid transport by solute gradients in dead-end channels. <i>Asia-Pacific Journal of Chemical Engineering</i> , 2017, 12, 247-258.	1.5	2

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73	A simultaneous trajectory generation method for quadcopter intercepting ground mobile vehicle. International Journal of Advanced Robotic Systems, 2017, 14, 172988141771770.	2.1	2
74	PID Parameters Auto-Tuning Method for Industrial Temperature Adjustment. , 2021, , .		2
75	The Visual-Inertial- Dynamical Multirotor Dataset. , 2022, , .		2
76	On the stability of the Kapchinskij-Vladimirskij equation. , 2007, , .		1
77	Observer-based stabilization of an unstable parabolic PDE using the pseudospectral method and Sturm-Liouville theory. , 2009, , .		1
78	Control of ramp-up current profile dynamics in tokamak plasmas via the minimal-surface theory. , 2009, , .		1
79	Model order reduction for high dimensional linear systems based on rank-1 incremental proper orthogonal decomposition. , 2011, , .		1
80	Poloidal magnetic flux profile control in tokamaks via normalized coprime factorization robust control. , 2011, , .		1
81	Demand dynamics aggregation using hybrid systems. , 2012, , .		1
82	LS-SLAM: SLAM with Lebesgue sampling. , 2016, , .		1
83	Optimal control for realizing target flow velocity in 1D MHD flow. , 2017, , .		1
84	Timeâ€”action RL. IET Cyber-Systems and Robotics, 2019, 1, 28-37.	1.8	1
85	Rotary Kiln Burning State Recognition Based on POD Snapshots Method. , 2021, , .		1
86	Visual inference of flow flux via free surface PDE model and image sequence assimilation. IET Cyber-Systems and Robotics, 2019, 1, 20-27.	1.8	1
87	Extremum seeking adaptive control of beam envelope in particle accelerators. , 2006, , .		0
88	Robust control of the poloidal magnetic flux profile in the presence of unmodeled dynamics. , 2009, , .		0
89	Stability analysis of inclined plane flow and magnetohydrodynamic inclined plane flow. , 2015, , .		0
90	Parameter estimation for Ginzburg-Landau equation via implicit sampling. , 2016, , .		0

#	ARTICLE	IF	CITATIONS
91	Fast model order reduction via nonlinear optimization. , 2016, , .		0
92	Stability of the flapping-wing vehicle near hovering under active control by varying flapping frequency. , 2017, , .		0
93	An Experiment Implementation of Outdoor Formation Flight. , 2018, , .		0