Chao Xu

List of Publications by Year
in descending order

93 papers	1,693 citations	361413 20 h-index	330143 37 g-index
93 all docs	93 docs citations	93 times ranked	918 citing authors

#	ARTICLE	IF	CITATIONS
1	Electricity-structure-fluid coupled modelling and experiment of underwater flexible structure with partially distributed macro fiber composites. JVC/Journal of Vibration and Control, 2022, 28, 290-303.	2.6	4
2	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
3	DeepPTV: Particle Tracking Velocimetry for Complex Flow Motion via Deep Neural Networks. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-16.	4.7	4
4	Autonomous and Adaptive Navigation for Terrestrial-Aerial Bimodal Vehicles. IEEE Robotics and Automation Letters, 2022, 7, 3008-3015.	5.1	19
5	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
6	Geometrically Constrained Trajectory Optimization for Multicopters. IEEE Transactions on Robotics, 2022, 38, 3259-3278.	10.3	68
7	Swarm of micro flying robots in the wild. Science Robotics, 2022, 7, eabm5954.	17.6	139
8	Iterative Learning Tracking Control of High-Speed Trains With Nonlinearly Parameterized Uncertainties and Multiple Time-Varying Delays. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 20476-20488.	8.0	3
9	Star-Convex Constrained Optimization for Visibility Planning with Application to Aerial Inspection. , 2022, , .		3
10	Elastic Tracker: A Spatio-temporal Trajectory Planner for Flexible Aerial Tracking. , 2022, , .		11
11	The Visual-Inertial- Dynamical Multirotor Dataset. , 2022, , .		2
12	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
13	EGO-Planner: An ESDF-Free Gradient-Based Local Planner for Quadrotors. IEEE Robotics and Automation Letters, 2021, 6, 478-485.	5.1	121
14	TGK-Planner: An Efficient Topology Guided Kinodynamic Planner for Autonomous Quadrotors. IEEE Robotics and Automation Letters, 2021, 6, 494-501.	5.1	21
15	Learning hierarchical and efficient Person re-identification for robotic navigation. International Journal of Intelligent Robotics and Applications, 2021, 5, 104-118.	2.8	3
16	Rotary Kiln Burning State Recognition Based on POD Snapshots Method. , 2021, , .		1
17	PID Parameters Auto-Tuning Method for Industrial Temperature Adjustment. , 2021, , .		2
18	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

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19	External Forces Resilient Safe Motion Planning for Quadrotor. IEEE Robotics and Automation Letters, 2021, 6, 8506-8513.	5.1	16
20	Fast-Racing: An Open-Source Strong Baseline for $\mathrm{SE}(3)$ Planning in Autonomous Drone Racing. IEEE Robotics and Automation Letters, 2021, 6, 8631-8638.	5.1	23
21	Generating Large-Scale Trajectories Efficiently using Double Descriptions of Polynomials. , 2021, , .		14
22	Mapless-Planner: A Robust and Fast Planning Framework for Aggressive Autonomous Flight without Map Fusion. , 2021, , .		8
23	EVA-Planner: Environmental Adaptive Quadrotor Planning. , 2021, , .		11
24	EGO-Swarm: A Fully Autonomous and Decentralized Quadrotor Swarm System in Cluttered Environments. , 2021, , .		57
25	Stability and stabilization of a class of switched stochastic systems with saturation control. Science China Information Sciences, 2021, 64, 1.	4.3	4
26	Visibility-aware Trajectory Optimization with Application to Aerial Tracking. , 2021, , .		14
27	Learning-based 3D Occupancy Prediction for Autonomous Navigation in Occluded Environments. , 2021, , .		11
28	FAST-Dynamic-Vision: Detection and Tracking Dynamic Objects with Event and Depth Sensing. , 2021, , .		13
29	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
30	Vibration Suppression of a High-Speed Macroâ€"Micro Integrated System Using Computational Optimal Control. IEEE Transactions on Industrial Electronics, 2020, 67, 7841-7850.	7.9	13
31	Particle Image Velocimetry Based on a Deep Learning Motion Estimator. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 3538-3554.	4.7	89
32	Attitude Maneuver Planning of Agile Satellites for Time Delay Integration Imaging. Journal of Guidance, Control, and Dynamics, 2020, 43, 46-59.	2.8	15
33	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
34	Alternating Minimization Based Trajectory Generation for Quadrotor Aggressive Flight. IEEE Robotics and Automation Letters, 2020, 5, 4836-4843.	5.1	21
35	Filtering enhanced tomographic PIV reconstruction based on deep neural networks. IET Cyber-Systems and Robotics, 2020, 2, 43-52.	1.8	12
36	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

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37	Timeâ€inâ€action RL. IET Cyber-Systems and Robotics, 2019, 1, 28-37.	1.8	1
38	Dense motion estimation of particle images via a convolutional neural network. Experiments in Fluids, 2019, 60, 1.	2.4	101
39	Computational bilinear optimal control for a class of one-dimensional MHD flow systems. ISA Transactions, 2019, 85, 129-140.	5.7	9
40	Boundary stabilization of a class of reactionâ€"advectionâ€"diffusion systems via a gradient-based optimization approach. Journal of the Franklin Institute, 2019, 356, 173-195.	3.4	11
41	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
42	Optimal tracking control of flow velocity in a one-dimensional magnetohydrodynamic flow. Engineering Optimization, 2019, 51, 1-21.	2.6	12
43	Fast and Stable Learning of Dynamical Systems Based on Extreme Learning Machine. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2019, 49, 1175-1185.	9.3	45
44	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
45	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
46	Motion estimation under location uncertainty for turbulent fluid flows. Experiments in Fluids, 2018, 59, 1.	2.4	34
47	An Experiment Implementation of Outdoor Formation Flight. , 2018, , .		0
48	Computational optimal control of 1D colloid transport by solute gradients in dead-end micro-channels. Journal of Industrial and Management Optimization, 2018, 14, 1251-1269.	1.3	3
49	Controlâ€oriented modeling of colloid transport by solute gradients in deadâ€end channels. Asia-Pacific Journal of Chemical Engineering, 2017, 12, 247-258.	1.5	2
50	Stabilization of a general linear heatâ€ODE system coupling at an intermediate point. International Journal of Robust and Nonlinear Control, 2017, 27, 3951-3970.	3.7	6
51	Optimal control for realizing target flow velocity in 1D MHD flow. , 2017, , .		1
52	A simultaneous trajectory generation method for quadcopter intercepting ground mobile vehicle. International Journal of Advanced Robotic Systems, 2017, 14, 172988141771770.	2.1	2
53	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
54	Stability of the flapping-wing vehicle near hovering under active control by varying flapping frequency. , 2017, , .		0

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55	Parameter estimation for Ginzburg-Landau equation via implicit sampling. , 2016, , .		0
56	LS-SLAM: SLAM with Lebesgue sampling. , 2016, , .		1
57	Fast model order reduction via nonlinear optimization. , 2016, , .		0
58	Computational optimal control of the Saintâ€"Venant PDE model using the timeâ€scaling technique. Asia-Pacific Journal of Chemical Engineering, 2016, 11, 70-80.	1.5	5
59	Dynamic optimization of trajectory for rampâ€up current profile in tokamak plasma. Asia-Pacific Journal of Chemical Engineering, 2016, 11, 918-929.	1.5	2
60	Iterative learning control for MIMO second-order hyperbolic distributed parameter systems with uncertainties. Advances in Difference Equations, 2016, 2016, .	3.5	18
61	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
62	Stability analysis of inclined plane flow and magnetohydrodynamic inclined plane flow. , 2015, , .		0
63	Optimal boundary control for water hammer suppression in fluid transmission pipelines. Computers and Mathematics With Applications, 2015, 69, 275-290.	2.7	41
64	Stabilization of a second order ODEâ€"heat system coupling at intermediate point. Automatica, 2015, 60, 57-64.	5.0	39
65	Parameter estimation for nonlinear time-delay systems with noisy output measurements. Automatica, 2015, 60, 48-56.	5.0	53
66	Start-up phase plasma discharge design of a tokamak via control parameterization method. Chinese Physics B, 2015, 24, 035202.	1.4	2
67	Water hammer mitigation via PDE-constrained optimization. Control Engineering Practice, 2015, 45, 54-63.	5.5	25
68	Sensor deployment for pipeline leakage detection via optimal boundary control strategies. Journal of Industrial and Management Optimization, 2015, 11, 199-216.	1.3	11
69	Backstepping Synthesis for Feedback Control of First-Order Hyperbolic PDEs with Spatial-Temporal Actuation. Abstract and Applied Analysis, 2014, 2014, 1-13.	0.7	4
70	Iterative learning control of inhomogeneous distributed parameter systemsâ€"frequency domain design and analysis. Systems and Control Letters, 2014, 72, 22-29.	2.3	54
71	The approximation for the boundary optimal control problem of Burgersâ€"Fisher equation with constraints. Applied Mathematics and Computation, 2014, 243, 889-898.	2.2	3
72	D-type anticipatory iterative learning control for a class of inhomogeneous heat equations. Automatica, 2013, 49, 2397-2408.	5.0	143

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73	Path planning for underactuated Dubins micro-robots using switching control. , 2013, , .		2
74	Time optimal Zermeloâ€™s navigation problem with moving and fixed obstacles. Applied Mathematics and Computation, 2013, 224, 866-875.	2.2	35
75	Lowâ€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
76	Computing Open-Loop Optimal Control of the<i>q</i>-Profile in Ramp-Up Tokamak Plasmas Using the Minimal-Surface Theory. Plasma Science and Technology, 2013, 15, 403-410.	1.5	3
77	Demand dynamics aggregation using hybrid systems. , 2012, , .		1
78	Model order reduction for high dimensional linear systems based on rank-1 incremental proper orthogonal decomposition. , 2011, , .		1
79	Poloidal magnetic flux profile control in tokamaks via normalized coprime factorization robust control. , 2011, , .		1
80	Sequential linear quadratic control of bilinear parabolic PDEs based on POD model reduction. Automatica, 2011, 47, 418-426.	5.0	47
81	On recursive proper orthogonal decomposition via perturbation theory with applications to distributed sensing in cyber-physical systems. , 2010, , .		2
82	Transport Parameter Estimations of Plasma Transport Dynamics Using the Extended Kalman Filter. IEEE Transactions on Plasma Science, 2010, 38, 359-364.	1.3	9
83	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
84	Iterative design of suboptimal feedback control for bilinear parabolic PDE systems. , 2009, , .		3
85	Robust control of the poloidal magnetic flux profile in the presence of unmodeled dynamics. , 2009, , .		0
86	On Iterative Learning Control of parabolic distributed parameter systems. , 2009, , .		31
87	Observer-based stabilization of an unstable parabolic PDE using the pseudospectral method and Sturm-Liouville theory. , 2009, , .		1
88	Control of ramp-up current profile dynamics in tokamak plasmas via the minimal-surface theory. , 2009, , .		1
89	Stabilization of linearized 2D magnetohydrodynamic channel flow by backstepping boundary control. Systems and Control Letters, 2008, 57, 805-812.	2.3	43
90	Backstepping Boundary Stabilization of Linearized 2D Hartman Flow. Proceedings of the American Control Conference, 2007, , .	0.0	3

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91	POD-based reduced order optimal control of parabolic PDE systems via diffusivity-interior-boundary actuation. , 2007, , .		3
92	On the stability of the Kapchinskij-Vladimirskij equation. , 2007, , .		1
93	Extremum seeking adaptive control of beam envelope in particle accelerators. , 2006, , .		0