Mitsuo Hirata

List of Publications by Year
in descending order

88 papers	517 citations	933447 10 h-index	839539 18 g-index
88 all docs	88 docs citations	88 times ranked	187 citing authors

#	Article	IF	Citations
1	H/sub â˜/ control versus disturbance-observer-based control. IEEE Transactions on Industrial Electronics, 1998, 45, 488-495.	7.9	91
2	Autonomous Control for Micro-Flying Robot and Small Wireless Helicopter X.R.B. , 2006, , .		35
3	Short Track-seeking Control of Hard Disk Drives by Using Final-state Control. IEEJ Transactions on Industry Applications, 2005, 125, 524-529.	0.2	31
4	Active vibration control of a 2-mass system using Î¼-synthesis with a descriptor form representation. Control Engineering Practice, 1996, 4, 545-552.	5.5	28
5	Power assist control for slide doors using an ideal door model. , 2008, , .		26
6	Nanoscale Servo Control for Galvano Scanner Using Final-State Control. IEEJ Transactions on Industry Applications, 2009, 129, 938-944.	0.2	24
7	Head Positioning Control of a Hard Disk Drive Using H^|^infin; Control Theory. Transactions of the Society of Instrument and Control Engineers, 1993, 29, 71-77.	0.2	23
8	Final-State Control Using Polynomial and Time-Series Data. IEEE Transactions on Magnetics, 2011, 47, 1944-1950.	2.1	19
9	Theory of <i>H</i>_{∞} Control and Disturbance Observer. IEEJ Transactions on Electronics, Information and Systems, 1995, 115, 1002-1011.	0.2	14
10	Autonomous Control of Micro Flying Robot. JVC/Journal of Vibration and Control, 2010, 16, 555-570.	2.6	13
11	Servo Performance Enhancement of Motion System via a Quantization Error Estimation Methodâ€"Introduction to Nanoscale Servo Control. IEEE Transactions on Industrial Electronics, 2009, 56, 3817-3824.	7.9	12
12	Short Track Seeking of Hard Disk Drives Under Multirate Controlâ€"Computationally Efficient Approach Based on Initial Value Compensation. IEEE/ASME Transactions on Mechatronics, 2005, 10, 535-545.	5.8	11
13	Model-based control system for advanced diesel combustion. IFAC-PapersOnLine, 2019, 52, 171-177.	0.9	11
14	Following Control of a Hard Disk Drive Using Sampled-Data H^|^infin; Control Theory. Transactions of the Society of Instrument and Control Engineers, 2000, 36, 172-179.	0.2	10
15	Exact linearization of PWM-hold discrete-time systems using input transformation. , 2015, , .		9
16	Modeling and Autonomous Control of Microminiature Ultra-Small Scale/Light Weight Micro-Flying Robot. Journal of the Robotics Society of Japan, 2007, 25, 121-129.	0.1	9
17	Active Vibration Control of a 2-mass Spring System using .MU.-Synthesis.. IEEJ Transactions on Industry Applications, 1994, 114, 512-519.	0.2	8
18	Vibration minimized trajectory design for information devices. , 2006, , .		7

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19	A Nonlinear Feedforward Controller Design Taking Account of Dynamics of Turbocharger and Manifolds for Diesel Engine Air-Path System. IFAC-PapersOnLine, 2019, 52, 341-346.	0.9	7
20	Track Seeking Control of Hard Disk Drives Using Polynomial-Input-Type FSC. IEEJ Transactions on Industry Applications, 2010, 130, 277-282.	0.2	7
21	High bandwidth design of track-following control system of hard disk drive using H<sub>&#x0221E;</sub> control theory. , 2007, , .		6
22	A hybrid modeling method for mechanical systems. Mechatronics, 2010, 20, 59-66.	3.3	6
23	System identification of a galvano scanner using input-output data obtained from positioning control. , 2015, , .		6
24	High Bandwidth Design of Hard Disk Control System Using <i>H</i><sub>&infin;</sub> Control with Feedback Type Uncertainty. IEEJ Transactions on Industry Applications, 2008, 128, 1211-1218.	0.2	6
25	A solvability condition of an extended control problem using Riccati inequalities. International Journal of Control, 2000, 73, 265-275.	1.9	5
26	Ultra-high speed positioning control of a gravure engraving unit using a discrete-time two-degree-of-freedom Hâˇž control. Control Engineering Practice, 2002, 10, 783-795.	5.5	5
27	Final-State Control Using a Time-Symmetric Polynomial Input. IEEE Transactions on Control Systems Technology, 2012, 20, 395-401.	5.2	5
28	Two-degree-of-freedom H-infinity control of combustion in diesel engine using a discrete dynamics model. Control Theory and Technology, 2017, 15, 109-116.	1.6	5
29	Final-state control for a galvano scanner: Minimizing mirror vibration in an inclined direction relative to the rotation axis. , 2017, , .		5
30	SVC-01 FINAL-STATE CONTROL USING A SAMPLED-DATA POLYNOMIAL FOR HARD DISK DRIVES(Servo Control) Tj ETQq0 0 0 rgBT /Overl Micromechatronics for Information and Precision Equipment IIP/ISPS Joint MIPE, 2009, 2009, 65-66.	0.0	5
31	Final-state control using a time symmetrical polynomial input. , 2010, , .		4
32	Polynomial-input-type final-state control taking account of input saturation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 4061-4066.	0.4	4
33	Trajectory Design of Galvano Scanner Considering Voltage Constraint of Current Amplifier. Electrical Engineering in Japan (English Translation of Denki Gakkai Ronbunshi), 2017, 198, 54-64.	0.4	4
34	Exact linearization of third-order systems with pulse-width-modulation-type inputs. Nonlinear Theory and Its Applications IEICE, 2018, 9, 204-217.	0.6	4
35	Exact Linearization of Three-Dimensional LTI Systems with PWM Inputs. IFAC-PapersOnLine, 2015, 48, 267-272.	0.9	3
36	Model-Based Control System for Air Path and Premixed Combustion of Diesel Engine. IFAC-PapersOnLine, 2018, 51, 522-528.	0.9	3

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37	Two-Degree-of-Freedom H Control of Diesel Engine Air Path System with Nonlinear Feedforward Controller. IFAC-PapersOnLine, 2018, 51, 535-541.	0.9	3
38	Trajectory Design Method of Galvano Scanner Considering Voltage Constraint of Current Amplifier. IEEJ Transactions on Industry Applications, 2013, 133, 10-19.	0.2	3
39	Performance Enhancement of Slip Control of a Lock-Up Clutch by Using Gain-Scheduled H.INF. Control Method. IEEJ Transactions on Industry Applications, 2010, 130, 1139-1146.	0.2	3
40	TRACK SEEKING CONTROL OF HARD DISK DRIVES BASED ON NEW TWO-DEGREE-OF-FREEDOM CONTROL SCHEME WITH VIBRATION MINIMIZED TRAJECTORIES. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 121-126.	0.4	2
41	A vibration minimized input design based on a polynomial input. , 2010, , .		2
42	Particle Model Predictive Control of Temperature Dispersion in Steel Plate Cooling* *This research was conducted as a part of the ISIJ Research Group on High Precision Process Control via Large Scale Database and Simulation Models.. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 272-273.	0.4	2
43	Determination of the end of the positioning phase using support vector machine. , 2015, , .		2
44	Star-shaped input-value sets of second-order PWM-type systems. , 2018, , .		2
45	Star-shaped control-vector sets of second-order systems with PWM-type input. Automatica, 2020, 116, 108924.	5.0	2
46	Final-state Control for a Long Span Motion. Transactions of the Society of Instrument and Control Engineers, 2009, 45, 696-702.	0.2	2
47	A Design method for Two-Degree-of-Freedom Controller using the Dynamical Model of the Feedback Controller.. IEEJ Transactions on Industry Applications, 1996, 116, 71-78.	0.2	2
48	Exact Linearization of PWM-control Systems Using Input Transformation. Transactions of the Society of Instrument and Control Engineers, 2016, 52, 205-212.	0.2	2
49	Two-Degree-of-Freedom Controller Design for Diesel Engine Airpath System Considering Dynamics of Turbocharger and Manifolds. , 0, , .		2
50	Nonlinear feedforward controller design for air-path system with transport dynamics of external EGR system. IFAC-PapersOnLine, 2021, 54, 1-6.	0.9	2
51	Power assist control for slide doors. , 2007, , .		1
52	Development of a Slip Speed Control System for a Lockup Clutch (Part III). SAE International Journal of Engines, 2009, 2, 935-940.	0.4	1
53	High—bandwidth design of hard disk control system using H_∞ control with feedback—type uncertainty. Electrical Engineering in Japan (English Translation of Denki Gakkai) Tj ETQq1 1 0.784314 rgBT /Overlock		
54	Parallel feedforward design using LMI for unknown disturbance estimation of non-minimum phase system. , 2014, , .		1

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55	Parallel Feedforward Model for Improving Estimates of Unknown Disturbances to Non-Minimum-Phase Systems. SICE Journal of Control Measurement and System Integration, 2015, 8, 354-361.	0.7	1
56	Determination of the End of Positioning Phase Using SVM: Kernel Choice and Parameter Tuning**This work was supported by JSPS KAKENHI Grant Number 25420429.. IFAC-PapersOnLine, 2016, 49, 103-108.	0.9	1
57	A study on frequency-shaped PWM-type final-state control with quantization. , 2021, , .		1
58	A Design Method of TDOF Controller for Sampled-Data Control System: A Method Using Dynamical Model of Feedback Controller. , 1999, , .		1
59	Ultra-High Speed Positioning Control of a Piezoelectirc Actuator by Using Discrete-Time Two-Degree-of-Freedom H_∞ Control. IEEJ Transactions on Industry Applications, 2001, 121, 879-886.	0.2	1
60	Two-Degrees-of-Freedom Model Matching Control of Shift-by-Wire System with Emergency Mechanical Link. IEEJ Transactions on Industry Applications, 2008, 128, 1262-1268.	0.2	1
61	Modeling and Control of Bimodal Coiler System. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2010, 96, 451-458.	0.4	1
62	Dispersion Control of Steel Plate Temperature by Particle Model Predictive Control. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2013, 99, 275-282.	0.4	1
63	Design of H.INF. Controllers for Plants Having Poles on the j.OMEGA. Axis. H.INF. Motion Control.. IEEJ Transactions on Industry Applications, 1995, 115, 1253-1262.	0.2	1
64	Ultra-Fast Motion Control. , 2017, , 107-136.		1
65	Scheduling Parameter Reduction of Diesel Engine Air Path LPV Model by PCA and Autoencoder-Based Method. IFAC-PapersOnLine, 2020, 53, 13994-13999.	0.9	1
66	Modeling and Control of Ultra-High Speed Servo System Using Piezoactuator.. Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C, 2000, 66, 2981-2987.	0.2	0
67	Nanoscale servo control using low precision sensors. , 2008, , .		0
68	Performance Enhancement of Track-Following Control of HDD by Using Inter-Sampling Information. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 50-54.	0.4	0
69	Two-degree-of-freedom model matching control of shift-by-wire system with emergency mechanical link. Electrical Engineering in Japan (English Translation of Denki Gakkai Ronbunshi), 2011, 174, 45-52.	0.4	0
70	Identification of a mechanical hybrid system switched by the absolute value of velocity or displacement. Electronics and Communications in Japan, 2011, 94, 65-72.	0.5	0
71	Vibration Control of a Coil Car by Using Final-State Control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 276-277.	0.4	0
72	H_∞ control of combustion in diesel engines using a discrete dynamics model. Journal of Physics: Conference Series, 2016, 744, 012105.	0.4	0

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73	Multi-input Exact Linearization Method for PWM-type Input Sampled-data Systems. Transactions of the Society of Instrument and Control Engineers, 2018, 54, 194-200.	0.2	0
74	A Design Method of TDOF Controller for Sampled-Data Control System. Transactions of the Society of Instrument and Control Engineers, 2001, 37, 471-473.	0.2	0
75	Power Assist H_∞ Control of Shift Lever with Spring Connected Link. IEEJ Transactions on Industry Applications, 2007, 127, 1133-1140.	0.2	0
76	Power Assist Control for Slide Doors. IEEJ Transactions on Industry Applications, 2008, 128, 1062-1063.	0.2	0
77	An Identification Method of a Mechanical Hybrid System Switched by the Absolute Value of Velocity or Displacement. IEEJ Transactions on Electronics, Information and Systems, 2008, 128, 781-787.	0.2	0
78	Tension Control of a Bimodal Coiler System by Final-State Control. IEEJ Transactions on Industry Applications, 2011, 131, 252-258.	0.2	0
79	Tracking Control of an XY Stage by Considering Suppression of Machine-Stand Vibration. IEEJ Transactions on Industry Applications, 2011, 131, 237-243.	0.2	0
80	649 Fast and Accurate Determination of the End of Positioning Control Based on Support Vector Machine. The Proceedings of the Dynamics & Design Conference, 2012, 2012, _649-1_-_649-7_.	0.0	0
81	Trajectory Design Method for Voltage Saturation of a Current Amplifier. , 2012, , .		0
82	High Performance Prop-hanging Flight Control of Fixed-wing Aircraft Using Quaternions. Transactions of the Society of Instrument and Control Engineers, 2013, 49, 275-283.	0.2	0
83	A Solvability Condition of Extended H^∞ Control Problems Using Riccati Inequalities. Transactions of the Society of Instrument and Control Engineers, 1998, 34, 741-748.	0.2	0
84	Feedfoward Input Design Method for Galvano Scanner Considering Mirror Vibration in Inclined Direction Relative to the Rotation Axis. IEEJ Transactions on Industry Applications, 2016, 136, 851-860.	0.2	0
85	Output Perfect Tracking Control for a Plant with PWM-Type Input. IFAC-PapersOnLine, 2020, 53, 8351-8356.	0.9	0
86	Model-based Control of Premixed Diesel Combustion. Transactions of the Society of Instrument and Control Engineers, 2020, 56, 176-186.	0.2	0
87	A Study on Reducing Effect of Temporal Quantization Error in Pulse Drive Systems. , 2022, , .		0
88	Shifting Zeros of Pulse Modulation Driven Systems via Exact Linearization Using Multi-Degree-of-Freedom Pulses. IEEE Transactions on Control Systems Technology, 2023, 31, 27-38.	5.2	0