

Ryuta Sato

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

111
papers

580
citations

12
h-index

19
g-index

114
ext. papers

671
ext. citations

1.5
avg, IF

4.35
L-index

#	Paper	IF	Citations
111	Enhancement of geometric accuracy of five-axis machining centers based on identification and compensation of geometric deviations. <i>International Journal of Machine Tools and Manufacture</i> , 2013 , 68, 11-20	9.4	72
110	Analysis of circular trajectory equivalent to cone-frustum milling in five-axis machining centers using motion simulator. <i>International Journal of Machine Tools and Manufacture</i> , 2013 , 64, 1-11	9.4	35
109	Optimal workpiece orientation to reduce the energy consumption of a milling process. <i>International Journal of Precision Engineering and Manufacturing - Green Technology</i> , 2015 , 2, 5-13	3.8	34
108	Evaluation of Synchronous Motion in Five-axis Machining Centers With a Tilting Rotary Table. <i>Journal of Advanced Mechanical Design, Systems and Manufacturing</i> , 2007 , 1, 24-35	0.6	29
107	Mathematical Model of Linear Motor Stage with Non-Linear Friction Characteristics. <i>Journal of Advanced Mechanical Design, Systems and Manufacturing</i> , 2008 , 2, 675-684	0.6	19
106	Modeling and Controller Tuning Techniques for Feed Drive Systems 2005 , 669		16
105	High Performance Motion Control of Rotary Table for 5-Axis Machining Centers. <i>International Journal of Automation Technology</i> , 2007 , 1, 113-119	0.8	16
104	Generation Mechanism of Quadrant Glitches and Compensation for it in Feed Drive Systems of NC Machine Tools. <i>International Journal of Automation Technology</i> , 2012 , 6, 154-162	0.8	16
103	Analysis of the Coupled Vibration Between Feed Drive Systems and Machine Tool Structure. <i>International Journal of Automation Technology</i> , 2015 , 9, 689-697	0.8	16
102	Dynamic synchronous accuracy of translational and rotary axes. <i>International Journal of Mechatronics and Manufacturing Systems</i> , 2011 , 4, 201	0.8	14
101	Experimental Evaluation on the Friction Characteristics of Linear Ball Guides. <i>Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C</i> , 2007 , 73, 2811-2819		13
100	Proposal of Process Planning System for End-Milling Operation Considering Product Design Constraints. <i>Transactions of the Institute of Systems Control and Information Engineers</i> , 2017 , 30, 81-86	0.1	13
99	A method for the evaluation and magnified representation of two-dimensional contouring error. <i>Precision Engineering</i> , 2017 , 50, 433-439	2.9	12
98	Influence of Motion Errors of Feed Drive Systems on Machined Surface. <i>Journal of Advanced Mechanical Design, Systems and Manufacturing</i> , 2012 , 6, 781-791	0.6	12
97	Sensitivity Analysis in Ball Bar Measurement of Three-Dimensional Circular Movement Equivalent to Cone-Frustum Cutting in Five-Axis Machining Centers. <i>Journal of Advanced Mechanical Design, Systems and Manufacturing</i> , 2013 , 7, 317-332	0.6	12
96	Finished Surface Simulation Method to Predicting the Effects of Machine Tool Motion Errors. <i>International Journal of Automation Technology</i> , 2014 , 8, 801-810	0.8	12
95	Method for generating CNC programs based on block-processing time to improve speed and accuracy of machining curved shapes. <i>Precision Engineering</i> , 2019 , 55, 33-41	2.9	9

94	Sensitivity analysis of relationship between error motions and machined shape errors in five-axis machining center - Peripheral milling using square-end mill as test case -. <i>Precision Engineering</i> , 2019 , 60, 28-41	2.9	8
93	3D Circular Interpolation Motion Equivalent to Cone-Frustum Cutting in Five-Axis Machining Centers and its Sensitivity Analysis. <i>Procedia CIRP</i> , 2012 , 1, 530-535	1.8	8
92	Mathematical Model of a CNC Rotary Table Driven by a Worm Gear. <i>International Journal of Intelligent Mechatronics and Robotics</i> , 2012 , 2, 27-40		8
91	Feed Drive Simulator. <i>International Journal of Automation Technology</i> , 2011 , 5, 875-882	0.8	8
90	Motion Accuracy Enhancement of Five-Axis Machine Tools by Modified CL-Data. <i>International Journal of Automation Technology</i> , 2018 , 12, 699-706	0.8	8
89	Automatic process planning system for end-milling operation considering CAM operator's intention. <i>Transactions of the JSME (in Japanese)</i> , 2018 , 84, 17-00563-17-00563	0.2	7
88	Quadrant glitch compensation by a modified disturbance observer for linear motor stages. <i>Precision Engineering</i> , 2019 , 59, 18-25	2.9	7
87	Machining operation planning system which utilize past machining operation data to generate new NC program. <i>Transactions of the JSME (in Japanese)</i> , 2015 , 81, 15-00280-15-00280	0.2	7
86	Motion Control Techniques for Synchronous Motions of Translational and Rotary Axes. <i>Procedia CIRP</i> , 2012 , 1, 265-270	1.8	7
85	Development of a CAD-CAM Interaction System to Generate a Flexible Machining Process Plan. <i>International Journal of Automation Technology</i> , 2015 , 9, 104-114	0.8	7
84	Time domain coupled simulation of machine tool dynamics and cutting forces considering the influences of nonlinear friction characteristics and process damping. <i>Precision Engineering</i> , 2020 , 61, 103-109	2.9	7
83	Cutting Force and Finish Surface Simulation of End Milling Operation in Consideration of Static Tool Deflection by Using Voxel Model. <i>Procedia CIRP</i> , 2018 , 77, 574-577	1.8	7
82	Sensor-less estimation of positioning reversal value for ball screw feed drives. <i>Precision Engineering</i> , 2019 , 60, 116-120	2.9	6
81	Influence of motion error of feed drive systems onto machined surface generated by ball end mill. <i>Journal of Advanced Mechanical Design, Systems and Manufacturing</i> , 2014 , 8, JAMDSM0044-JAMDSM0044	0.6	6
80	Motion Characteristics of High Performance Rotary Tables for CNC Machines 2008 ,		6
79	Influence of linear-axis error motions on simultaneous three-axis controlled motion accuracy defined in ISO 10791-6. <i>Precision Engineering</i> , 2020 , 61, 110-119	2.9	6
78	Influences of geometric and dynamic synchronous errors onto machined surface in 5-axis machining center. <i>Journal of Advanced Mechanical Design, Systems and Manufacturing</i> , 2016 , 10, JAMDSM0071-JAMDSM0071	0.6	6
77	Geometric Error Compensation of Five-Axis Machining Centers Based on On-Machine Workpiece Measurement. <i>International Journal of Automation Technology</i> , 2018 , 12, 230-237	0.8	6

76	Experimental evaluation of mechanical and electrical power consumption of feed drive systems driven by a ball-screw. <i>Precision Engineering</i> , 2020 , 64, 280-287	2.9	5
75	Evaluation Method for Behavior of Rotary Axis Around Motion Direction Changing. <i>International Journal of Automation Technology</i> , 2017 , 11, 171-178	0.8	5
74	Method to evaluate speed and accuracy performance of CNC machine tools by speed-error 2-D representation. <i>Journal of Advanced Mechanical Design, Systems and Manufacturing</i> , 2019 , 13, JAMDSM0022-JAMDSM0022	0.6	4
73	Influence of Motion Error of Translational and Rotary Axes onto Machined Surface Generated by Simultaneous Five-axis Motion. <i>Procedia CIRP</i> , 2014 , 14, 269-274	1.8	4
72	Workpiece Setup Simulation based on Machinable Space of Five-axis Machining Centers. <i>Procedia CIRP</i> , 2014 , 14, 257-262	1.8	4
71	Surface Roughness Control Based on Digital Copy Milling Concept to Achieve Autonomous Milling Operation. <i>Procedia CIRP</i> , 2012 , 4, 35-40	1.8	4
70	Development of a Feed Drive Simulator. <i>Key Engineering Materials</i> , 2012 , 516, 154-159	0.4	4
69	A Method for Evaluating the Speed and Accuracy of CNC Machine Tools. <i>Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21</i> , 2017 , 2017.9, 034		4
68	Motion Trajectory Measurement of NC Machine Tools Using Accelerometers. <i>International Journal of Automation Technology</i> , 2011 , 5, 387-394	0.8	4
67	Analytical time constant design for jerk-limited acceleration profiles to minimize residual vibration after positioning operation in NC machine tools. <i>Precision Engineering</i> , 2021 , 71, 47-56	2.9	4
66	Influence of NC Program Quality and Geometric Errors of Rotary Axes on S-Shaped Machining Test Accuracy. <i>Journal of Manufacturing and Materials Processing</i> , 2018 , 2, 21	2.2	3
65	Instantaneous rigid force model based on oblique cutting to predict milling force. <i>Transactions of the JSME (in Japanese)</i> , 2017 , 83, 17-00247-17-00247	0.2	3
64	Active vibration suppression of NC machine tools for high-speed contouring motions. <i>Journal of Advanced Mechanical Design, Systems and Manufacturing</i> , 2020 , 14, JAMDSM0005-JAMDSM0005	0.6	3
63	Improvement of Simultaneous 5-Axis Controlled Machining Accuracy by CL-Data Modification. <i>International Journal of Automation Technology</i> , 2019 , 13, 583-592	0.8	3
62	Tool Motion Control Referring to Voxel Information of Removal Volume Voxel Model to Achieve Autonomous Milling Operation. <i>International Journal of Automation Technology</i> , 2014 , 8, 792-800	0.8	3
61	Virtual milling force monitoring method based on in-process milling force prediction model to eliminate predetermination of cutting coefficients. <i>Procedia CIRP</i> , 2018 , 77, 22-25	1.8	3
60	Influence of linear ball guide preloads and retainers on the microscopic motions of a feed-drive system. <i>Journal of Advanced Mechanical Design, Systems and Manufacturing</i> , 2018 , 12, JAMDSM0099-JAMDSM0099	0.6	3
59	Machining state monitoring in end milling based on comparison of monitored and predicted cutting torques. <i>Journal of Advanced Mechanical Design, Systems and Manufacturing</i> , 2019 , 13, JAMDSM0052-JAMDSM0052	0.6	3

58	Machinable Space Derivation of 5-Axis and Multi-Tasking Machine Tools for Workpiece Setting Decision. <i>Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C</i> , 2013 , 79, 4543-4552		2
57	Controller Design Method of Feed Drive Systems for Improving Multi-axis Synchronous Accuracy. <i>Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C</i> , 2007 , 73, 693-700		2
56	A029 A Concept of Total Removal Volume Feature in Selecting Machining Sequence for Generative Automated Process Planning. <i>Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21</i> , 2013 , 2013.7, 135-140		2
55	Identification Method of Error Motions and Geometric Errors of a Rotary Axis by R-Test. <i>International Journal of Automation Technology</i> , 2020 , 14, 399-408	0.8	2
54	Customized End Milling Operation of Dental Artificial Crown Without CAM Operation. <i>International Journal of Automation Technology</i> , 2018 , 12, 947-954	0.8	2
53	Study on Motion Accuracy Enhancement in NC Machine Tools. <i>Journal of the Japan Society for Precision Engineering</i> , 2010 , 76, 535-540	0.1	2
52	Surface Roughness Control Based on Digital Copy Milling Concept to Achieve Autonomous Milling Operation. <i>International Journal of Automation Technology</i> , 2013 , 7, 401-409	0.8	2
51	Evaluation of dynamic behavior of rotary axis in five-axis machining center (Behavior around motion direction changes). <i>Journal of Advanced Mechanical Design, Systems and Manufacturing</i> , 2016 , 10, JAMDSM0075-JAMDSM0076	0.6	2
50	Nanometer-Order Contouring Control in a Feed Drive System Using Linear Ball Guides by Applying a Combination of Modified Disturbance Observer and Repetitive Control. <i>Nanomanufacturing and Metrology</i> , 2021 , 4, 118-129	3.4	2
49	Study on the influence of geometric errors in rotary axes on cubic-machining test considering the workpiece coordinate system. <i>Precision Engineering</i> , 2021 , 71, 36-46	2.9	2
48	Cutting trouble detection system based on quantitative comparison between predicted and measured cutting torques (1st report Cutting trouble detection for tool wear). <i>Transactions of the JSME (in Japanese)</i> , 2018 , 84, 17-00433-17-00433	0.2	1
47	Evaluation of Axial Displacement Caused by Rotary Axis Motion Direction Change in Five-Axis Controlled Machining Centers. <i>Journal of the Japan Society for Precision Engineering</i> , 2017 , 83, 893-898	0.1	1
46	A001 Influence of Motion Error of Feed Drive Systems onto Machined Surface Generated by Ball End-mill. <i>Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21</i> , 2013 , 2013.7, 1-6		1
45	Finished Surface Analysis of Cone Frustum Generated by Simultaneous 5-Axis Controlled Motion. <i>Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C</i> , 2013 , 79, 4613-4623		1
44	Tool Motion Control Referring Voxel Information of Removal Volume Voxel Model to Achieve Autonomous Milling Operation. <i>Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C</i> , 2013 , 79, 4572-4581		1
43	Measurement of Synchronous Motion in Five-axis Machining Centers. <i>Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C</i> , 2006 , 72, 3672-3678		1
42	A028 Motion Path Evaluation based on Energy Consumption of Feed Drive System in NC Machine Tool. <i>Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21</i> , 2013 , 2013.7, 129-134		1
41	A practical method to monitor tool wear in end milling using a changing cutting force model that requires no additional sensors. <i>Journal of Advanced Mechanical Design, Systems and Manufacturing</i> , 2021 , 15, JAMDSM0077-JAMDSM0077	0.6	1

40	Development of Servo-clinometer with Rotary Encoder and Electronic Level. <i>Journal of the Japan Society for Precision Engineering</i> , 2009 , 75, 412-417	0.1	1
39	Mathematical Model of Linear Motor Stage with Non-linear Friction Characteristics. <i>Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21</i> , 2007 , 2007.4, 8D414		1
38	Influence of contact between tool and workpiece onto vibration characteristics of machine tools (Evaluation method and influence of contact length of cutting edge). <i>Transactions of the JSME (in Japanese)</i> , 2020 , 86, 20-00185-20-00185	0.2	1
37	Machine Bed Support with Sliding Surface for Improving the Motion Accuracy. <i>International Journal of Automation Technology</i> , 2016 , 10, 447-454	0.8	1
36	Influence of Torsional Damping and Lead of Ball-screw onto Vibration Characteristics of Feed Drive System. <i>Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21</i> , 2017 , 2017.9, 043		1
35	Determination of Cutting Conditions for NC Program Generation by Reusing Machining Case Data based on Removal Volume Feature. <i>Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21</i> , 2017 , 2017.9, 055		1
34	A revised instantaneous rigid force model for end-milling operation to eliminate predetermination of cutting coefficients. <i>Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21</i> , 2017 , 2017.9, 060		1
33	Investigation of the influence of NC controller and control mode by machining tests of blades on machining time. <i>Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21</i> , 2017 , 2017.9, 097		1
32	3233 Wear Estimation of Ball Screw and Support Bearing Based on Servo Signals in Feed Drive System. <i>Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21</i> , 2011 , 2011.6, _3233-1_-_3233-6_		1
31	Vibration Mode and Motion Trajectory Simulations of an Articulated Robot by a Dynamic Model Considering Joint Bearing Stiffness. <i>International Journal of Automation Technology</i> , 2021 , 15, 631-640	0.8	1
30	Evaluating the influence of mechanical system vibration characteristics on servo motor efficiency. <i>Precision Engineering</i> , 2021 , 72, 680-689	2.9	1
29	Evaluation of torque-dependent coupling characteristics and their influence on the system vibration characteristics. <i>Journal of Advanced Mechanical Design, Systems and Manufacturing</i> , 2021 , 15, JAMDSM0060-JAMDSM0060	0.6	1
28	Mechanism for active joint as an equivalent to the combination of revolute joint and proximal fixed-length link. <i>Robotics and Computer-Integrated Manufacturing</i> , 2016 , 37, 179-187	9.2	0
27	Positioning command design method for shorter distance positioning operations based on analyzed residual vibration amplitude. <i>Precision Engineering</i> , 2021 , 74, 36-36	2.9	0
26	Influence of Preload and Retainer of Linear Ball Guides on Feed Drive System in Microscopic Motions. <i>Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21</i> , 2017 , 2017.9, 030		0
25	Time domain coupled simulation of machine tool dynamic behaviour and cutting force based on voxel simulator of machining operation. <i>Transactions of the JSME (in Japanese)</i> , 2017 , 83, 17-00254-17-00254	0.2	
24	On-machine measurement and correction of machining error using laser displacement sensor. <i>Transactions of the JSME (in Japanese)</i> , 2018 , 84, 18-00191-18-00191	0.2	
23	Mathematical Model of Linear Motor Stage with Non-Linear Friction Characteristics(Machine Elements and Manufacturing). <i>Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C</i> , 2009 , 75, 470-475		

22 High Performance Motion Control of Rotary Axis for Simultaneous Multi-axis Controlled Motions. *Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C*, **2008**, 74, 60-67

21 Power Consumption Simulation of Servo Motors Focusing on the Influence of Mechanical Vibration on Motor Efficiency. *International Journal of Automation Technology*, **2022**, 16, 104-116 0.8

20 10402 Mathematical Model of Feed Drive System during Microscopic Motion. *The Proceedings of Conference of Kanto Branch*, **2005**, 2005.11, 335-336 0

19 320 Attempt on Measurement of Perpendicularity of Motion at Machining Center. *The Proceedings of the Manufacturing & Machine Tool Conference*, **2006**, 2006.6, 195-196 0

18 1509 Measurement Method of Simultaneous Three Axes control Motion at Machining Center. *The Proceedings of the JSME Annual Meeting*, **2006**, 2006.4, 71-72

17 2A2-H08 Dynamic Characteristics of Feed Drive System with Nonlinear Spring Behavior. *The Proceedings of JSME Annual Conference on Robotics and Mechatronics (Robomec)*, **2007**, 2007, _2A2-H08_1-2A2-H08_2

16 Development of Servo-clinometer Using Rotary Encoder and Precision Level. *Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21*, **2007**, 2007.4, 9E534

15 Motion Control Techniques of Rotary Table for 5-axis Machining Centers. *Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21*, **2007**, 2007.4, 7C306

14 Automated On-Machine Measurement Based on Process Planning Information. *Transactions of the Institute of Systems Control and Information Engineers*, **2019**, 32, 212-217 0.1

13 Applicability assessment and adaptation method of cutting conditions based on acceptable area to select cutting conditions for end-milling operation. *Transactions of the JSME (in Japanese)*, **2020**, 86, 20-00153-20-0015 0.2

12 1906 Generative Machining Process Planning System Based on Total Removal Volume Concept. *Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21*, **2015**, 2015.8, _1906-1_-_1906-5_

11 0104 Study on the Machine Bed Support for Improving the Motion Accuracy. *Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21*, **2015**, 2015.8, _0104-1_-_0104-6_

10 0105 Influences of Geometric and Dynamic Synchronous Errors onto Machined Surface in 5-axis Machining Center. *Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21*, **2015**, 2015.8, _0105-1_-_0105-6_

9 Coupled Simulation between Machine Tool Behavior and Cutting Force using Voxel Simulator. *Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21*, **2017**, 2017.9, 044

8 Vibration Suppression Method by Compensation Torque for High Speed Tracking Motions. *Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21*, **2017**, 2017.9, 042

7 Comparison of 4-axis and 5-axis Simultaneous Machining of Complex Shaped Blade. *Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21*, **2017**, 2017.9, 098

6 Motion Accuracy Enhancement of 5-axis Machine Tools by Modified CL-data. *Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21*, **2017**, 2017.9, 045

5 3321 Influence of Motion Error of Feed Drives Systems on Machined Surface. *Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21*, **2011**, 2011.6, _3321-1_-_3321-6_

- 4 3338 Active Tool Motion Control utilizing Voxel Property to Removal Volume in Digital Copy Milling. *Proceedings of International Conference on Leading Edge Manufacturing in 21st Century LEM21, 2011*, 2011.6, _3338-1_-_3338-6_
- 3 S1310206 On-Machine Measurement and Corrective Machining Using Laser Displacement Sensor. *The Proceedings of Mechanical Engineering Congress Japan, 2014*, 2014, _S1310206--_S1310206- 0
- 2 Effect of CAD/CAM Post Process on S-Shaped Machining Test for Five-Axis Machining Center. *International Journal of Automation Technology, 2019*, 13, 593-601 0.8
- 1 Influence of Tool Length and Profile Errors on the Inaccuracy of Cubic-Machining Test Results. *Journal of Manufacturing and Materials Processing, 2021*, 5, 51 2.2