

Hiroshi Yabuno

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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.

101 papers	963 citations	19 h-index	26 g-index
116 ext. papers	1,137 ext. citations	3.6 avg, IF	4.6 L-index

#	Paper	IF	Citations
101	Refined models of elastic beams undergoing large in-plane motions: Theory and experiment. <i>International Journal of Solids and Structures</i> , 2006 , 43, 5066-5084	3.1	80
100	Van der Pol type self-excited micro-cantilever probe of atomic force microscopy. <i>Nonlinear Dynamics</i> , 2008 , 54, 137-149	5	48
99	Nonlinear normal modes and primary resonance of horizontally supported Jeffcott rotor. <i>Nonlinear Dynamics</i> , 2011 , 66, 377-387	5	41
98	Bifurcation Control of Parametrically Excited Duffing System by a Combined Linear-Plus-Nonlinear Feedback Control. <i>Nonlinear Dynamics</i> , 1997 , 12, 263-274	5	41
97	Nonlinear Normal Modes of a Parametrically Excited Cantilever Beam. <i>Nonlinear Dynamics</i> , 2001 , 25, 65-77	5	39
96	Modeling of planar nonshallow prestressed beams towards asymptotic solutions. <i>Mechanics Research Communications</i> , 2004 , 31, 301-310	2.2	30
95	Suppression of Parametric Resonance in Cantilever Beam With a Pendulum (Effect of Static Friction at the Supporting Point of the Pendulum). <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2004 , 126, 149-162	1.6	29
94	Self-excited coupled cantilevers for mass sensing in viscous measurement environments. <i>Applied Physics Letters</i> , 2013 , 103, 063104	3.4	28
93	Amplitude reduction of primary resonance of nonlinear oscillator by a dynamic vibration absorber using nonlinear coupling. <i>Nonlinear Dynamics</i> , 2009 , 55, 67-78	5	28
92	Bifurcation in an inverted pendulum with tilted high-frequency excitation: analytical and experimental investigations on the symmetry-breaking of the bifurcation. <i>Journal of Sound and Vibration</i> , 2004 , 273, 493-513	3.9	28
91	Utilizing nonlinear phenomena to locate grazing in the constrained motion of a cantilever beam. <i>Nonlinear Dynamics</i> , 2009 , 57, 335-349	5	27
90	Nonlinear Analysis of a Parametrically Excited Cantilever Beam. (Effect of the Tip Mass on Stationary Response).. <i>JSME International Journal Series C-Mechanical Systems Machine Elements and Manufacturing</i> , 1998 , 41, 555-562		27
89	Non-linear cancellation of the parametric resonance in elastic beams: Theory and experiment. <i>International Journal of Solids and Structures</i> , 2007 , 44, 2209-2224	3.1	24
88	Stabilization of the Parametric Resonance of a Cantilever Beam by Bifurcation Control with a Piezoelectric Actuator. <i>Nonlinear Dynamics</i> , 2001 , 26, 143-161	5	24
87	Simply supported elastic beams under parametric excitation. <i>Nonlinear Dynamics</i> , 2008 , 53, 129-138	5	23
86	Self-excited vibrational viscometer for high-viscosity sensing. <i>Journal of Applied Physics</i> , 2014 , 116, 124305	3.5	22
85	Effect of Lateral Linear Stiffness on Nonlinear Characteristics of Hunting Motion of a Railway Wheelset. <i>Meccanica</i> , 2002 , 37, 555-568	2.1	20

84	Amplitude reduction of parametric resonance by dynamic vibration absorber based on quadratic nonlinear coupling. <i>Journal of Sound and Vibration</i> , 2010 , 329, 2205-2217	3.9	19
83	Closed-loop non-linear control of an initially imperfect beam with non-collocated input. <i>Journal of Sound and Vibration</i> , 2004 , 273, 695-711	3.9	19
82	Passive method for controlling the nonlinear characteristics in a parametrically excited hinged-hinged beam by the addition of a linear spring. <i>Journal of Sound and Vibration</i> , 2015 , 350, 111-122	3.9	18
81	Swing-up and stabilization of an underactuated manipulator without state feedback of free joint. <i>IEEE Transactions on Automation Science and Engineering</i> , 2004 , 20, 359-365		18
80	Self-excited coupled-microcantilevers for mass sensing. <i>Applied Physics Letters</i> , 2015 , 106, 223105	3.4	16
79	Creation–annihilation process of limit cycles in the Rayleigh–Duffing oscillator. <i>Nonlinear Dynamics</i> , 2012 , 70, 1007-1016	5	15
78	Instability and periodic motion of a physical pendulum with a vibrating suspension point (theoretical and experimental approach). <i>Doklady Physics</i> , 2005 , 50, 467-472	0.8	15
77	Buckling of a beam subjected to electromagnetic force and its stabilization by controlling the perturbation of the bifurcation. <i>Nonlinear Dynamics</i> , 1996 , 10, 271-285	5	15
76	Mass Sensing in a Liquid Environment Using Nonlinear Self-Excited Coupled-Microcantilevers. <i>Journal of Microelectromechanical Systems</i> , 2018 , 27, 774-779	2.5	15
75	Optimal shapes of parametrically excited beams. <i>Structural and Multidisciplinary Optimization</i> , 2004 , 27, 435	3.6	14
74	Experimental investigation of a buckled beam under high-frequency excitation. <i>Archive of Applied Mechanics</i> , 2007 , 77, 339-351	2.2	13
73	Reachable and stabilizable area of an underactuated manipulator without state feedback control. <i>IEEE/ASME Transactions on Mechatronics</i> , 2005 , 10, 397-403	5.5	13
72	Analysis of the van der Pol System With Coulomb Friction Using the Method of Multiple Scales. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2008 , 130,	1.6	12
71	Bifurcation phenomena of the reversal behavior of an automobile wiper blade. <i>Nonlinear Dynamics</i> , 2012 , 69, 1111-1123	5	11
70	Amplitude Control in a van der Pol-Type Self-Excited AFM Microcantilever. <i>Journal of System Design and Dynamics</i> , 2008 , 2, 886-897		11
69	Stabilization Control of Hunting Motion of Railway Vehicle Wheelset Using Gyroscopic Damper. <i>JVC/Journal of Vibration and Control</i> , 2008 , 14, 209-230	2	9
68	Mass sensing using a virtual cantilever virtually coupled with a real cantilever. <i>Applied Physics Letters</i> , 2019 , 115, 063103	3.4	8
67	Effect of Coulomb Damping on Buckling of a Two-Rod System. <i>Nonlinear Dynamics</i> , 1998 , 15, 207-224	5	8

66	Identification method for backbone curve of cantilever beam using van der Pol-type self-excited oscillation. <i>Nonlinear Dynamics</i> , 2021 , 103, 3429-3442	5	8
65	Motion control of a flexible underactuated manipulator using resonance in a flexible active arm. <i>International Journal of Mechanical Sciences</i> , 2020 , 174, 105432	5.5	7
64	Proposition for sensorless self-excitation by a piezoelectric device. <i>Journal of Sound and Vibration</i> , 2018 , 419, 544-557	3.9	7
63	Cubic-quintic nonlinear parametric resonance of a simply supported beam. <i>Nonlinear Dynamics</i> , 2017 , 90, 549-560	5	7
62	Van der Pol-Type Self-Excited Microcantilever Probe for Atomic Force Microscopy. <i>Japanese Journal of Applied Physics</i> , 2011 , 50, 076601	1.4	7
61	Amplitude control of self-excited weakly coupled cantilevers for mass sensing using nonlinear velocity feedback control. <i>Nonlinear Dynamics</i> , 2020 , 99, 85-97	5	7
60	Highly sensitive AFM using self-excited weakly coupled cantilevers. <i>Applied Physics Letters</i> , 2019 , 115, 133105	3.4	6
59	Self-Excited Vibrational Cantilever-Type Viscometer Driven by Piezo-Actuator. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2015 , 137,	1.6	6
58	Stiffness Sensor for Cubic Nonlinear Elasticity Using Nonlinear Self-Excited Oscillation. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2014 , 136,	1.6	6
57	Nonplanar Vibration of a Vertical Fluid-Conveying Pipe (Effect of Horizontal Excitation at the Upper End). <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2014 , 136,	1.6	6
56	Reachable area of an underactuated space manipulator subjected to simple spinning. <i>Nonlinear Dynamics</i> , 2007 , 51, 345-353	5	6
55	Stabilization and utilization of nonlinear phenomena based on bifurcation control for slow dynamics. <i>Journal of Sound and Vibration</i> , 2008 , 315, 766-780	3.9	6
54	Hopf-Hopf interactions in a spring-supported pipe conveying fluid. <i>Mechanical Systems and Signal Processing</i> , 2021 , 152, 107390	7.8	6
53	Subcritical Hopf and saddle-node bifurcations in hunting motion caused by cubic and quintic nonlinearities: experimental identification of nonlinearities in a roller rig. <i>Nonlinear Dynamics</i> , 2019 , 98, 657-670	5	5
52	Analysis of the behavior of a wiper blade around the reversal in consideration of dynamic and static friction. <i>Journal of Sound and Vibration</i> , 2017 , 393, 76-91	3.9	4
51	Stabilization Control of a Simply Supported Buckled Beam. <i>JVC/Journal of Vibration and Control</i> , 2003 , 9, 449-473	2	4
50	Nonlinear Normal Modes of a Parametrically Excited Cantilever Beam 2001 , 65-77		4
49	Nonlinear interactions between unstable oscillatory modes in a cantilevered pipe conveying fluid. <i>Nonlinear Dynamics</i> , 2019 , 98, 2927-2938	5	3

48	Review of applications of self-excited oscillations to highly sensitive vibrational sensors. <i>ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik</i> , 2019 , 101, e201900009	1	3
47	Theoretical and experimental analyses on stabilization of hunting motion by utilizing the traction motor as a passive gyroscopic damper. <i>Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit</i> , 2015 , 229, 395-401	1.4	3
46	Measurement of added mass for an object oscillating in viscous fluids using nonlinear self-excited oscillations. <i>Nonlinear Dynamics</i> , 2020 , 102, 1987-1996	5	3
45	Ultra-Sensitive Minute Mass Sensing Using a Microcantilever Virtually Coupled with a Virtual Cantilever. <i>Sensors</i> , 2020 , 20,	3.8	3
44	Impact oscillations with multiple modes between a pantograph and an overhead rigid conductor line in a railway current collection system. <i>JVC/Journal of Vibration and Control</i> , 2012 , 18, 499-508	2	3
43	Van der Pol-Type Self-Excited Microcantilever Probe for Atomic Force Microscopy. <i>Japanese Journal of Applied Physics</i> , 2011 , 50, 076601	1.4	3
42	Parametric Resonance Due to Asymmetric Nonlinearity of Restoring Force. <i>Journal of System Design and Dynamics</i> , 2008 , 2, 898-907		3
41	Nonlinear Analysis of a Self-Excited Cantilever Beam 2005 , 2037		3
40	Measurement of softening cubic nonlinear and negative linear stiffness using van der Pol type self-excited oscillation. <i>Nonlinear Dynamics</i> , 2016 , 83, 283-290	5	2
39	Swing-Up Control of a Three-Link Underactuated Manipulator by High-Frequency Horizontal Excitation. <i>Journal of Computational and Nonlinear Dynamics</i> , 2013 , 8,	1.4	2
38	Self-excited Oscillation for High-viscosity Sensing and Self-excited Coupled Oscillation for Ultra-sensitive Mass Sensing. <i>Procedia IUTAM</i> , 2017 , 22, 216-220		2
37	Stabilization of a 1/3-order subharmonic resonance using nonlinear dynamic vibration absorber. <i>Nonlinear Dynamics</i> , 2010 , 59, 747-758	5	2
36	Nonlinear Characteristics of Primary Resonances in Horizontally Supported Jeffcott Rotor. <i>Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C</i> , 2008 , 74, 1106-1112		2
35	Stabilization Control for Hunting Motion of Railway Vehicle by Gyroscopic Damper (Experimental Analysis Using 1/10 Scale Vehicle Model). <i>Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C</i> , 2008 , 74, 235-241		2
34	Amplitude Control in van der Pol Type Self-excited Micro Cantilever for AFM. <i>Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C</i> , 2007 , 73, 2225-2231		2
33	Sensorless Self-Excited Vibrational Viscometer with Two Hopf Bifurcations Based on a Piezoelectric Device. <i>Sensors</i> , 2021 , 21,	3.8	2
32	Mass sensing using self-excited oscillation in viscous environments. <i>Procedia Engineering</i> , 2017 , 199, 471-476		1
31	Reduction of Primary Resonance by Nonlinear Coupling with Vibration Absorber. <i>Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C</i> , 2007 , 73, 1005-1011 ¹		

- 30 Analysis and Application of Nonlinear Phenomena. *Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C*, **2007**, 73, 958-965 1
- 29 Identification of Coulomb Friction at Supporting Points of a Hinged-Hinged Beam. *Journal of System Design and Dynamics*, **2007**, 1, 352-361 1
- 28 MNM-2A-2 MEMS : Micro Viscosity Sensor. *The Proceedings of the Symposium on Micro-Nano Science and Technology*, **2010**, 2010.2, 45-46 0 1
- 27 Cantilever self-excited with a higher mode by a piezoelectric actuator. *Nonlinear Dynamics*, **2021**, 106, 295-307 5 1
- 26 Nanoscale cutting using self-excited microcantilever.. *Scientific Reports*, **2022**, 12, 618 4.9 0
- 25 Experimental amplitude and frequency control of a self-excited microcantilever by linear and nonlinear feedback. *Journal of Micromechanics and Microengineering*, **2022**, 32, 034001 2 0
- 24 Amplitude control for sensorless self-excited oscillation of cantilever based on a piezoelectric device. *Nonlinear Dynamics*, **2022**, 108, 15 5 0
- 23 Highly sensitive measurements of perturbations in stiffness of a resonator by virtual coupling with a virtual resonator. *Nonlinear Dynamics*, 1 5 0
- 22 Non-planar motions due to nonlinear interactions between unstable oscillatory modes in a cantilevered pipe conveying fluid. *Mechanical Systems and Signal Processing*, **2022**, 178, 109183 7.8 0
- 21 Preface: Special issue on applications of nonlinear resonances to microscale and nanoscale systems. *International Journal of Dynamics and Control*, **2015**, 3, 121-121 1.7
- 20 Stabilization of Buckled Beam with Coulomb Friction by High-Frequency Excitation. *Procedia IUTAM*, **2012**, 5, 140-143
- 19 Oscillation Theory in Nanoscale Measurement with Microcantilever Probe. *Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C*, **2013**, 79, 2664-2672
- 18 Noncontact observation with van der Pol-type self-excited FM-AFM in liquid. *Nonlinear Theory and Its Applications IEICE*, **2013**, 4, 256-271 0.6
- 17 van der Pol-type Self-Excited Cantilever by Integral Controller(Dynamics & Design Conference 2009). *Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C*, **2010**, 76, 1346-1352
- 16 Research on Self-Sensing and Self-Actuated Cantilever for Atomic Force Microscopy Probe. *Journal of System Design and Dynamics*, **2008**, 2, 117-126
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- 14 Control of an Impacted Cantilever toward Application of an Atomic Force Microscope in Tapping Mode. *Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C*, **2008**, 74, 1409-1415
- 13 Self-Sensing and Self-Excited Actuator of Atomic Force Microscopy Probe for Measuring Biological Molecules. *Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C*, **2007**, 73, 2910-2917

- 12 Identification of Coulomb Friction Existing at Supporting Points of Hinged-hinged Beam. *Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C*, **2007**, 73, 701-707
- 11 Stabilization control and motion control for some mechanical systems by using bifurcation control. *Nonlinear Analysis: Theory, Methods & Applications*, **2005**, 63, e943-e954 1.3
- 10 Motion Control of an Underactuated Manipulator by Using High-Frequency Excitation **2005**, 459-466
- 9 2114 Properties of AFM with "van der Pol"-type self-excited micro-cantilever probe. *The Proceedings of the Conference on Information Intelligence and Precision Equipment IIP*, **2008**, 2008, 246-250
- 8 MNS-06 DEVELOPMENT OF VAN DER POL-TYPE SELF-EXCITED FM-AFM : VDP-AFM(Micro/Nanosystem Science and Technology II,Technical Program of Oral Presentations). *Proceedings of JSME-IIP/ASME-ISPS Joint Conference on Micromechatronics for Information and Precision Equipment IIP/ISPS Joint MIPE*, **2009**, 2009, 95-96
- 7 6-2 Double Spiral Shaped Micro Viscosity Sensor(EMEMS). *The Proceedings of the Symposium on Micro-Nano Science and Technology*, **2011**, 2011.3, 61-62 0
- 6 201 Impact Oscillations between a Pantograph and an Overhead Rigid Conductor Line : Bifurcation Analysis Considering the Flexural Vibration of a Pantograph. *The Proceedings of the Dynamics & Design Conference*, **2012**, 2012, _201-1_- _201-9_ 0
- 5 6PM2-A-3 Development of narrow gap type viscosity sensor with double spiral vibrating arms : evaluation of small sensor-holder and control electric unit. *The Proceedings of the Symposium on Micro-Nano Science and Technology*, **2013**, 2013.5, 157-158 0
- 4 Linear and passive control method for the steady state amplitude in a parametrically excited hinged-hinged beam. *IEICE Proceeding Series*, **2014**, 2, 26-29
- 3 Suppression of a nonplanar motion in an externally excited string by the addition of viscosity based on velocity feedback control. *Nonlinear Dynamics*, **2021**, 104, 3205 5
- 2 Identification of the parameters of the Maxwell model using self-excited oscillation. *Journal of Sound and Vibration*, **2019**, 442, 598-608 3.9
- 1 Dynamic Analysis of a Wiper Blade in Consideration of Attack Angle and Clarification of the Jumping Phenomenon. *Applied Sciences (Switzerland)*, **2022**, 12, 4112 2.6