Hiroshi Yabuno

List of Publications by Year in Descending Order

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	Nanoscale cutting using self-excited microcantilever.. *Scientific Reports*, **2022**, 12, 618	4.9	0
100	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
99	Amplitude control for sensorless self-excited oscillation of cantilever based on a piezoelectric device. *Nonlinear Dynamics*, **2022**, 108, 15	5	0
98	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	
97	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
96	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	
95	Hopf-Hopf interactions in a spring-supported pipe conveying fluid. *Mechanical Systems and Signal Processing*, **2021**, 152, 107390	7.8	6
94	Identification method for backbone curve of cantilever beam using van der Pol-type self-excited oscillation. *Nonlinear Dynamics*, **2021**, 103, 3429-3442	5	8
93	Sensorless Self-Excited Vibrational Viscometer with Two Hopf Bifurcations Based on a Piezoelectric Device. *Sensors*, **2021**, 21,	3.8	2
92	Cantilever self-excited with a higher mode by a piezoelectric actuator. *Nonlinear Dynamics*, **2021**, 106, 295-307	5	1
91	Measurement of added mass for an object oscillating in viscous fluids using nonlinear self-excited oscillations. *Nonlinear Dynamics*, **2020**, 102, 1987-1996	5	3
90	Motion control of a flexible underactuated manipulator using resonance in a flexible active arm. *International Journal of Mechanical Sciences*, **2020**, 174, 105432	5.5	7
89	Ultra-Sensitive Minute Mass Sensing Using a Microcantilever Virtually Coupled with a Virtual Cantilever. *Sensors*, **2020**, 20,	3.8	3
88	Amplitude control of self-excited weakly coupled cantilevers for mass sensing using nonlinear velocity feedback control. *Nonlinear Dynamics*, **2020**, 99, 85-97	5	7
87	Subcritical Hopf and saddle-node bifurcations in hunting motion caused by cubic and quintic nonlinearities: experimental identification of nonlinearities in a roller rig. *Nonlinear Dynamics*, **2019**, 98, 657-670	5	5
86	Nonlinear interactions between unstable oscillatory modes in a cantilevered pipe conveying fluid. *Nonlinear Dynamics*, **2019**, 98, 2927-2938	5	3
85	Highly sensitive AFM using self-excited weakly coupled cantilevers. *Applied Physics Letters*, **2019**, 115, 133105	3.4	6

#	Reference		
84	Review of applications of self-excited oscillations to highly sensitive vibrational sensors. *ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik*, **2019**, 101, e201900009	1	3
83	Mass sensing using a virtual cantilever virtually coupled with a real cantilever. *Applied Physics Letters*, **2019**, 115, 063103	3.4	8
82	Identification of the parameters of the Maxwell model using self-excited oscillation. *Journal of Sound and Vibration*, **2019**, 442, 598-608	3.9	
81	Proposition for sensorless self-excitation by a piezoelectric device. *Journal of Sound and Vibration*, **2018**, 419, 544-557	3.9	7
80	Mass Sensing in a Liquid Environment Using Nonlinear Self-Excited Coupled-Microcantilevers. *Journal of Microelectromechanical Systems*, **2018**, 27, 774-779	2.5	15
79	Analysis of the behavior of a wiper blade around the reversal in consideration of dynamic and static friction. *Journal of Sound and Vibration*, **2017**, 393, 76-91	3.9	4
78	Cubic-quintic nonlinear parametric resonance of a simply supported beam. *Nonlinear Dynamics*, **2017**, 90, 549-560	5	7
77	Self-excited Oscillation for High-viscosity Sensing and Self-excited Coupled Oscillation for Ultra-senseitive Mass Sensing. *Procedia IUTAM*, **2017**, 22, 216-220		2
76	Mass sensing using self-excited oscillation in viscous environments. *Procedia Engineering*, **2017**, 199, 471-476		1
75	Measurement of softening cubic nonlinear and negative linear stiffness using van der Pol type self-excited oscillation. *Nonlinear Dynamics*, **2016**, 83, 283-290	5	2
74	Passive method for controlling the nonlinear characteristics in a parametrically excited hinged-hinged beam by the addition of a linear spring. *Journal of Sound and Vibration*, **2015**, 350, 111-122	3.9	18
73	Theoretical and experimental analyses on stabilization of hunting motion by utilizing the traction motor as a passive gyroscopic damper. *Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit*, **2015**, 229, 395-401	1.4	3
72	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	
71	Self-excited coupled-microcantilevers for mass sensing. *Applied Physics Letters*, **2015**, 106, 223105	3.4	16
70	Self-Excited Vibrational Cantilever-Type Viscometer Driven by Piezo-Actuator. *Journal of Vibration and Acoustics, Transactions of the ASME*, **2015**, 137,	1.6	6
69	Stiffness Sensor for Cubic Nonlinear Elasticity Using Nonlinear Self-Excited Oscillation. *Journal of Vibration and Acoustics, Transactions of the ASME*, **2014**, 136,	1.6	6
68	Nonplanar Vibration of a Vertical Fluid-Conveying Pipe (Effect of Horizontal Excitation at the Upper End). *Journal of Vibration and Acoustics, Transactions of the ASME*, **2014**, 136,	1.6	6
67	Self-excited vibrational viscometer for high-viscosity sensing. *Journal of Applied Physics*, **2014**, 116, 124305	2.5	22

66	Linear and passive control method for the steady state amplitude in a parametrically excited hinged-hinged beam. *IEICE Proceeding Series*, **2014**, 2, 26-29		
65	Swing-Up Control of a Three-Link Underactuated Manipulator by High-Frequency Horizontal Excitation. *Journal of Computational and Nonlinear Dynamics*, **2013**, 8,	1.4	2
64	Self-excited coupled cantilevers for mass sensing in viscous measurement environments. *Applied Physics Letters*, **2013**, 103, 063104	3.4	28
63	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		
62	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	
61	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	
60	Creation annihilation process of limit cycles in the Rayleigh Duffing oscillator. *Nonlinear Dynamics*, **2012**, 70, 1007-1016	5	15
59	Impact oscillations with multiple modes between a pantograph and an overhead rigid conductor line in a railway current collection system. *JVC/Journal of Vibration and Control*, **2012**, 18, 499-508	2	3
58	Stabilization of Buckled Beam with Coulomb Friction by High-Frequency Excitation. *Procedia IUTAM*, **2012**, 5, 140-143		
57	Bifurcation phenomena of the reversal behavior of an automobile wiper blade. *Nonlinear Dynamics*, **2012**, 69, 1111-1123	5	11
56	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	
55	Nonlinear normal modes and primary resonance of horizontally supported Jeffcott rotor. *Nonlinear Dynamics*, **2011**, 66, 377-387	5	41
54	Van der Pol-Type Self-Excited Microcantilever Probe for Atomic Force Microscopy. *Japanese Journal of Applied Physics*, **2011**, 50, 076601	1.4	3
53	Van der Pol-Type Self-Excited Microcantilever Probe for Atomic Force Microscopy. *Japanese Journal of Applied Physics*, **2011**, 50, 076601	1.4	7
52	6-2 Double Spiral Shaped Micro Viscosity Sensor(MEMS). *The Proceedings of the Symposium on Micro-Nano Science and Technology*, **2011**, 2011.3, 61-62	0	
51	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		
50	Stabilization of a 1/3-order subharmonic resonance using nonlinear dynamic vibration absorber. *Nonlinear Dynamics*, **2010**, 59, 747-758	5	2
49	Amplitude reduction of parametric resonance by dynamic vibration absorber based on quadratic nonlinear coupling. *Journal of Sound and Vibration*, **2010**, 329, 2205-2217	3.9	19

48	MNM-2A-2 EMEMS : Micro Viscosity Sensor. *The Proceedings of the Symposium on Micro-Nano Science and Technology*, **2010**, 2010.2, 45-46	0	1
47	Amplitude reduction of primary resonance of nonlinear oscillator by a dynamic vibration absorber using nonlinear coupling. *Nonlinear Dynamics*, **2009**, 55, 67-78	5	28
46	Utilizing nonlinear phenomena to locate grazing in the constrained motion of a cantilever beam. *Nonlinear Dynamics*, **2009**, 57, 335-349	5	27
45	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		
44	Analysis of the van der Pol System With Coulomb Friction Using the Method of Multiple Scales. *Journal of Vibration and Acoustics, Transactions of the ASME*, **2008**, 130,	1.6	12
43	Stabilization Control of Hunting Motion of Railway Vehicle Wheelset Using Gyroscopic Damper. *JVC/Journal of Vibration and Control*, **2008**, 14, 209-230	2	9
42	Research on Self-Sensing and Self-Actuated Cantilever for Atomic Force Microscopy Probe. *Journal of System Design and Dynamics*, **2008**, 2, 117-126		
41	Amplitude Control in a van der Pol-Type Self-Excited AFM Microcantilever. *Journal of System Design and Dynamics*, **2008**, 2, 886-897		11
40	Parametric Resonance Due to Asymmetric Nonlinearity of Restoring Force. *Journal of System Design and Dynamics*, **2008**, 2, 898-907		3
39	Parametric Resonance due to Asymmetric Nonlinearity of Restoring Force. *Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C*, **2008**, 74, 1087-1092		
38	Nonlinear Characteristics of Primary Resonances in Horizontally Supported Jeffcott Rotor. *Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C*, **2008**, 74, 1106-1112		2
37	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		
36	Stabilization Control for Hunting Motion of Railway Vehicle by Gyroscopic Damper (Experimental Analysis Using 1/10 Scale Vehicle Model). *Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C*, **2008**, 74, 235-241		2
35	Simply supported elastic beams under parametric excitation. *Nonlinear Dynamics*, **2008**, 53, 129-138	5	23
34	Van der Pol type self-excited micro-cantilever probe of atomic force microscopy. *Nonlinear Dynamics*, **2008**, 54, 137-149	5	48
33	Stabilization and utilization of nonlinear phenomena based on bifurcation control for slow dynamics. *Journal of Sound and Vibration*, **2008**, 315, 766-780	3.9	6
32	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		0
31	Non-linear cancellation of the parametric resonance in elastic beams: Theory and experiment. *International Journal of Solids and Structures*, **2007**, 44, 2209-2224	3.1	24

30	Reachable area of an underactuated space manipulator subjected to simple spinning. *Nonlinear Dynamics*, **2007**, 51, 345-353	5	6
29	Experimental investigation of a buckled beam under high-frequency excitation. *Archive of Applied Mechanics*, **2007**, 77, 339-351	2.2	13
28	Reduction of Primary Resonance by Nonlinear Coupling with Vibration Absorber. *Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C*, **2007**, 73, 1005-1011[1]		
27	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		
26	Analysis and Application of Nonliner Phenomena. *Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C*, **2007**, 73, 958-965		1
25	Identification of Coulomb Friction at Supporting Points of a Hinged-Hinged Beam. *Journal of System Design and Dynamics*, **2007**, 1, 352-361		1
24	Amplitude Control in van der Pol Type Self-excited Micro Cantilever for AFM. *Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C*, **2007**, 73, 2225-2231		2
23	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		
22	Refined models of elastic beams undergoing large in-plane motions: Theory and experiment. *International Journal of Solids and Structures*, **2006**, 43, 5066-5084	3.1	80
21	Reachable and stabilizable area of an underactuated manipulator without state feedback control. *IEEE/ASME Transactions on Mechatronics*, **2005**, 10, 397-403	5.5	13
20	Stabilization control and motion control for some mechanical systems by using bifurcation control. *Nonlinear Analysis: Theory, Methods & Applications*, **2005**, 63, e943-e954	1.3	
19	Instability and periodic motion of a physical pendulum with a vibrating suspension point (theoretical and experimental approach). *Doklady Physics*, **2005**, 50, 467-472	0.8	15
18	Nonlinear Analysis of a Self-Excited Cantilever Beam **2005**, 2037		3
17	Motion Control of an Underactuated Manipulator by Using High-Frequency Excitation **2005**, 459-466		
16	Suppression of Parametric Resonance in Cantilever Beam With a Pendulum (Effect of Static Friction at the Supporting Point of the Pendulum). *Journal of Vibration and Acoustics, Transactions of the ASME*, **2004**, 126, 149-162	1.6	29
15	Optimal shapes of parametrically excited beams. *Structural and Multidisciplinary Optimization*, **2004**, 27, 435	3.6	14
14	Bifurcation in an inverted pendulum with tilted high-frequency excitation: analytical and experimental investigations on the symmetry-breaking of the bifurcation. *Journal of Sound and Vibration*, **2004**, 273, 493-513	3.9	28
13	Modeling of planar nonshallow prestressed beams towards asymptotic solutions. *Mechanics Research Communications*, **2004**, 31, 301-310	2.2	30

LIST OF PUBLICATIONS

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12	Closed-loop non-linear control of an initially imperfect beam with non-collocated input. *Journal of Sound and Vibration*, **2004**, 273, 695-711	3.9	19
11	Swing-up and stabilization of an underactuated manipulator without state feedback of free joint. *IEEE Transactions on Automation Science and Engineering*, **2004**, 20, 359-365		18
10	Stabilization Control of a Simply Supported Buckled Beam. *JVC/Journal of Vibration and Control*, **2003**, 9, 449-473	2	4
9	Effect of Lateral Linear Stiffness on Nonlinear Characteristics of Hunting Motion of a Railway Wheelset. *Meccanica*, **2002**, 37, 555-568	2.1	20
8	Nonlinear Normal Modes of a Parametrically Excited Cantilever Beam. *Nonlinear Dynamics*, **2001**, 25, 65-77	5	39
7	Stabilization of the Parametric Resonance of a Cantilever Beam by Bifurcation Control with a Piezoelectric Actuator. *Nonlinear Dynamics*, **2001**, 26, 143-161	5	24
6	Nonlinear Normal Modes of a Parametrically Excited Cantilever Beam **2001**, 65-77		4
5	Effect of Coulomb Damping on Buckling of a Two-Rod System. *Nonlinear Dynamics*, **1998**, 15, 207-224	5	8
4	Nonlinear Analysis of a Parametrically Excited Cantilever Beam. (Effect of the Tip Mass on Stationary Response).. *JSME International Journal Series C-Mechanical Systems Machine Elements and Manufacturing*, **1998**, 41, 555-562		27
3	Bifurcation Control of Parametrically Excited Duffing System by a Combined Linear-Plus-Nonlinear Feedback Control. *Nonlinear Dynamics*, **1997**, 12, 263-274	5	41
2	Buckling of a beam subjected to electromagnetic force and its stabilization by controlling the perturbation of the bifurcation. *Nonlinear Dynamics*, **1996**, 10, 271-285	5	15
1	Highly sensitive measurements of perturbations in stiffness of a resonator by virtual coupling with a virtual resonator. *Nonlinear Dynamics*,1	5	0