Anil K Bajaj

List of Publications by Citations

66 papers	1,245 citations	20 h-index	33 g-index
76 ext. papers	1,409 ext. citations	3 avg, IF	4.23 L-index

#	Paper	IF	Citations
66	Non-linear dynamics of a shallow arch under periodic excitation □1:2 internal resonance. *International Journal of Non-Linear Mechanics*, **1994**, 29, 349-366	2.8	77
65	Amplitude modulated dynamics of a resonantly excited autoparametric two degree-of-freedom system. *Nonlinear Dynamics*, **1994**, 5, 433-457	5	71
64	Experimental Techniques and Identification of Nonlinear and Viscoelastic Properties of Flexible Polyurethane Foam. *Nonlinear Dynamics*, **2000**, 22, 281-313	5	70
63	Hopf Bifurcation Phenomena in Tubes Carrying a Fluid. *SIAM Journal on Applied Mathematics*, **1980**, 39, 213-230	1.8	70
62	Non-Linear vibrations and chaos in harmonically excited rectangular plates with one-to-one internal resonance. *Nonlinear Dynamics*, **1993**, 4, 433-460	5	68
61	Nonlinear aerodynamic damping of sharp-edged flexible beams oscillating at low Keulegan□arpenter numbers. *Journal of Fluid Mechanics*, **2009**, 634, 269	3.7	66
60	Modeling of automotive drum brakes for squeal and parameter sensitivity analysis. *Journal of Sound and Vibration*, **2006**, 289, 245-263	3.9	62
59	Flow Induced Bifurcations to Three-Dimensional Oscillatory Motions in Continuous Tubes. *SIAM Journal on Applied Mathematics*, **1984**, 44, 270-286	1.8	56
58	A Microresonator Design Based on Nonlinear 1 : 2 Internal Resonance in Flexural Structural Modes. *Journal of Microelectromechanical Systems*, **2009**, 18, 744-762	2.5	55
57	Period-Doubling Bifurcations and Modulated Motions in Forced Mechanical Systems. *Journal of Applied Mechanics, Transactions ASME*, **1985**, 52, 446-452	2.7	43
56	Dynamics of a nonlinear microresonator based on resonantly interacting flexural-torsional modes. *Nonlinear Dynamics*, **2008**, 54, 31-52	5	40
55	Resonant dynamics of an autoparametric system: A study using higher-order averaging. *International Journal of Non-Linear Mechanics*, **1996**, 31, 21-39	2.8	36
54	Identification of Nonlinear and Viscoelastic Properties of Flexible Polyurethane Foam. *Nonlinear Dynamics*, **2003**, 34, 319-346	5	34
53	Whole-body vibratory response study using a nonlinear multi-body model of seat-occupant system with viscoelastic flexible polyurethane foam. *Industrial Health*, **2010**, 48, 663-74	2.5	33
52	Nonlinear Normal Modes and Their Bifurcations for an Inertially Coupled Nonlinear Conservative System. *Nonlinear Dynamics*, **2005**, 42, 233-265	5	27
51	A Case Study on the Use of Fractional Derivatives: The Low-Frequency Viscoelastic Uni-Directional Behavior of Polyurethane Foam. *Nonlinear Dynamics*, **2004**, 38, 247-265	5	26
50	Bifurcations in Three-Dimensional Motions of Articulated Tubes, Part 1: Linear Systems and Symmetry. *Journal of Applied Mechanics, Transactions ASME*, **1982**, 49, 606-611	2.7	26

49	An Efficient Approach to Estimate Critical Value of Friction Coefficient in Brake Squeal Analysis. *Journal of Applied Mechanics, Transactions ASME*, **2007**, 74, 534-541	2.7	22
48	Nonlinear dynamics of a three-beam structure with attached mass and three-mode interactions. *Nonlinear Dynamics*, **2010**, 62, 461-484	5	21
47	Bifurcations in Three-Dimensional Motions of Articulated Tubes, Part 2: Nonlinear Analysis. *Journal of Applied Mechanics, Transactions ASME*, **1982**, 49, 612-618	2.7	21
46	Amplitude modulated chaos in two degree-of-freedom systems with quadratic nonlinearities. *Acta Mechanica*, **1997**, 124, 131-154	2.1	19
45	Periodic response predictions of beams on nonlinear and viscoelastic unilateral foundations using incremental harmonic balance method. *International Journal of Solids and Structures*, **2016**, 99, 28-39	3.1	17
44	An efficient solution methodology to study the response of a beam on viscoelastic and nonlinear unilateral foundation: Static response. *International Journal of Solids and Structures*, **2013**, 50, 2328-2339	3.1	17
43	Nonlinear normal modes in multi-mode models of an inertially coupled elastic structure. *Nonlinear Dynamics*, **2006**, 47, 25-47	5	17
42	Bifurcating Periodic Solutions in Rotationally Symmetric Systems. *SIAM Journal on Applied Mathematics*, **1982**, 42, 1078-1098	1.8	16
41	Computational Synthesis for Nonlinear Dynamics Based Design of Planar Resonant Structures. *Journal of Vibration and Acoustics, Transactions of the ASME*, **2013**, 135,	1.6	14
40	Amplitude modulated dynamics and bifurcations in the resonant response of a structure with cyclic symmetry. *Acta Mechanica*, **1995**, 109, 101-125	2.1	13
39	Topology optimization and internal resonances in transverse vibrations of hyperelastic plates. *International Journal of Solids and Structures*, **2016**, 81, 311-328	3.1	12
38	Global dynamics of an autoparametric spring–mass–pendulum system. *Nonlinear Dynamics*, **2007**, 49, 105-116	5	11
37	Nonlinear Response of Flexible Robotic Manipulators Performing Repetitive Tasks. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **1989**, 111, 470-479	1.6	11
36	Uncertainty quantification analysis of the dynamics of an electrostatically actuated microelectromechanical switch model. *Journal of Sound and Vibration*, **2015**, 349, 375-388	3.9	10
35	Synthesis of Harmonic Motion Generating Linkages—Part I: Function Generation. *Journal of Mechanisms, Transmissions, and Automation in Design*, **1988**, 110, 16-21		10
34	Design for 1:2 Internal Resonances in In-Plane Vibrations of Plates With Hyperelastic Materials. *Journal of Vibration and Acoustics, Transactions of the ASME*, **2014**, 136,	1.6	9
33	Non-resonant and resonant chaotic dynamics in externally excited cyclic systems. *Acta Mechanica*, **2001**, 150, 139-160	2.1	9
32	Dynamics of nonlinear structures with multiple equilibria: A singular perturbation-invariant manifold approach. *Zeitschrift Fur Angewandte Mathematik Und Physik*, **1999**, 50, 892	1.6	9

31	On the Stability of a Flexible Vehicle Controlled by a Human Pilot. *Vehicle System Dynamics*, **1988**, 17, 37-56	2.8	9
30	Interactions Between Self and Parametrically Excited Motions in Articulated Tubes. *Journal of Applied Mechanics, Transactions ASME*, **1984**, 51, 423-429	2.7	9
29	Prediction and verification of the periodic response of a single-degree-of-freedom foam-mass system by using incremental harmonic balance. *Nonlinear Dynamics*, **2015**, 82, 1933-1951	5	8
28	Static and Dynamic Response of Beams on Nonlinear Viscoelastic Unilateral Foundations: A Multimode Approach. *Journal of Vibration and Acoustics, Transactions of the ASME*, **2014**, 136,	1.6	8
27	Dynamics of structures with wideband autoparametric vibration absorbers: experiment. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2004**, 460, 1857-1880	2.4	8
26	Identification of Nonlinear Viscoelastic Models of Flexible Polyurethane Foam From Uniaxial Compression Data **2012**,		7
25	A Preliminary Investigation of the Dynamic Stability of Flexible Manipulators Performing Repetitive Tasks. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **1986**, 108, 206-214	1.6	7
24	In memory of Professor Ali H. Nayfeh. *Nonlinear Dynamics*, **2020**, 99, 1-9	5	7
23	Numerical Simulations of Flutter Instability of a Flexible Disk Rotating Close to a Rigid Wall. *JVC/Journal of Vibration and Control*, **2003**, 9, 95-118	2	6
22	Evaluation of Parametric Vibration and Stability of Flexible Cam-Follower Systems. *Journal of Mechanical Design, Transactions of the ASME*, **1994**, 116, 291-297	3	5
21	Nonlinear nonplanar dynamics of a parametrically excited inextensional elastic beam. *Nonlinear Dynamics*, **1991**, 2, 263-289	5	5
20	Bifurcations in the dynamics of an orthogonal double pendulum. *Nonlinear Dynamics*, **1993**, 4, 605-633	5	5
19	An efficient approach to estimate critical value of friction coefficient and sensitivity analysis for brake squeal. *International Journal of Vehicle Design*, **2009**, 51, 21	2.4	4
18	On the Formal Equivalence of Normal Form Theory and the Method of Multiple Time Scales. *Journal of Computational and Nonlinear Dynamics*, **2009**, 4,	1.4	4
17	Comprehensive Reduced-Order Models of Electrostatically Actuated MEMS Switches and Their Dynamics Including Impact and Bounce **2010**,		4
16	On the Method of Averaging, Integral Manifolds and Systems with Symmetry. *SIAM Journal on Applied Mathematics*, **1985**, 45, 343-359	1.8	4
15	Nonlinear Response of a Dynamic System due to Oscillatory Flow. *Journal of Offshore Mechanics and Arctic Engineering*, **1987**, 109, 345-356	1.5	4
14	. *Journal of Microelectromechanical Systems*, **2015**, 24, 1803-1816	2.5	3

List of Publications

13	Model reduction for discrete and elastic structures with inertial quadratic non-linearities. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, **2011**, 225, 2422-2435	1.3	3
12	Microresonators Based on 1:2 Internal Resonance **2005**, 529		3
11	Non-Stationary Responses in Externally Excited Two-Degrees-of-Freedom Nonlinear Systems with 1: 2 Internal Resonance. *JVC/Journal of Vibration and Control*, **2004**, 10, 1663-1697	2	3
10	On experiments in harmonically excited cantilever plates with 1:2 internal resonance. *Nonlinear Dynamics*, **2020**, 100, 15-32	5	2
9	Adomian Decomposition Method Applied to Nonlinear Normal Modes of an Inertially Coupled Conservative System. *JVC/Journal of Vibration and Control*, **2008**, 14, 107-134	2	2
8	Nonlinear Resonator With Interacting Flexural-Torsional Modes for Mass Sensing **2007**, 967		2
7	Discrimination of adhesion and viscoelasticity from nanoscale maps of polymer surfaces using bimodal atomic force microscopy. *Nanoscale*, **2021**, 13, 17428-17441	7.7	2
6	Uncertainty quantification in a resonant nonlinear MEMS structure. *International Journal of Non-Linear Mechanics*, **2018**, 101, 131-145	2.8	1
5	ROBUST CONTROL OF A CHAOTIC VIBRATORY SYSTEM. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **1993**, 03, 1075-1081	2	0
4	Modeling the Contact Stiffness Between a 2D Voronoi Honeycomb and a Flat Rigid Surface. *Materials Research Society Symposia Proceedings*, **2003**, 791, 5201		
3	Non-linear oscillations. *Mechanism and Machine Theory*, **1985**, 20, 243	4	
2	Audio-vestibular study in leprosy. *Indian Journal of Otolaryngology*, **1981**, 33, 131-134		
1	Cantilever signature of tip detachment during contact resonance AFM.. *Beilstein Journal of Nanotechnology*, **2021**, 12, 1286-1296	3	