

# Sunetra Sarkar

## List of Publications by Year in descending order

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72  
papers

946  
citations

471061

17  
h-index

476904

29  
g-index

76  
all docs

76  
docs citations

76  
times ranked

611  
citing authors

#	ARTICLE	IF	CITATIONS
1	Modeling physical uncertainties in dynamic stall induced fluid-structure interaction of turbine blades using arbitrary polynomial chaos. Computers and Structures, 2007, 85, 866-878.	2.4	122
2	Investigating chaotic wake dynamics past a flapping airfoil and the role of vortex interactions behind the chaotic transition. Physics of Fluids, 2018, 30, .	1.6	54
3	Nonlinear aeroelastic behavior of an oscillating airfoil during stall-induced vibration. Journal of Fluids and Structures, 2008, 24, 757-777.	1.5	52
4	Precursors to flutter instability by an intermittency route: A model free approach. Journal of Fluids and Structures, 2016, 61, 376-391.	1.5	51
5	Probabilistic collocation for period-1 limit cycle oscillations. Journal of Sound and Vibration, 2008, 311, 421-439.	2.1	41
6	Multi-fractality in aeroelastic response as a precursor to flutter. Journal of Sound and Vibration, 2017, 386, 390-406.	2.1	41
7	Numerical simulation of thrust generating flow past a pitching airfoil. Computers and Fluids, 2006, 35, 16-42.	1.3	40
8	Numerical simulation of incompressible viscous flow past a heaving airfoil. International Journal for Numerical Methods in Fluids, 2006, 51, 1-29.	0.9	33
9	Intermittency in pitch-plunge aeroelastic systems explained through stochastic bifurcations. Nonlinear Dynamics, 2018, 92, 1225-1241.	2.7	32
10	Investigations on precursor measures for aeroelastic flutter. Journal of Sound and Vibration, 2018, 419, 318-336.	2.1	30
11	Physical mechanism of intermittency route to aeroelastic flutter. Journal of Fluids and Structures, 2017, 75, 9-26.	1.5	28
12	Identifying the route to chaos in the flow past a flapping airfoil. European Journal of Mechanics, B/Fluids, 2017, 66, 38-59.	1.2	26
13	Effect of uncertainty on the bifurcation behavior of pitching airfoil stall flutter. Journal of Fluids and Structures, 2009, 25, 304-320.	1.5	24
14	Analysis of a Nonlinear Aeroelastic System with Parametric Uncertainties Using Polynomial Chaos Expansion. Mathematical Problems in Engineering, 2010, 2010, 1-21.	0.6	24
15	Investigations on a vortex induced vibration based energy harvester. Applied Physics Letters, 2017, 111, .	1.5	24
16	Influence of pitching angle of incidence on the dynamic stall behavior of a symmetric airfoil. European Journal of Mechanics, B/Fluids, 2008, 27, 219-238.	1.2	23
17	Study of asymmetric hovering in flapping flight. European Journal of Mechanics, B/Fluids, 2013, 37, 72-89.	1.2	23
18	Uncertainty Quantification of a Nonlinear Aeroelastic System Using Polynomial Chaos Expansion With Constant Phase Interpolation. Journal of Vibration and Acoustics, Transactions of the ASME, 2013, 135, .	1.0	16

#	ARTICLE	IF	CITATIONS
19	Study of a stall induced dynamical system under gust using the probability density evolution technique. Computers and Structures, 2016, 162, 38-47.	2.4	16
20	Wiener chaos expansions for estimating rain-flow fatigue damage in randomly vibrating structures with uncertain parameters. Probabilistic Engineering Mechanics, 2011, 26, 387-398.	1.3	15
21	Dynamic interlinking between near- and far-field wakes behind a pitching/heaving airfoil. Journal of Fluid Mechanics, 2021, 911, .	1.4	15
22	Transition to chaos in the flow-induced vibration of a pitching/plunging airfoil at low Reynolds numbers: Ruelle-Takens-Newhouse scenario. International Journal of Non-Linear Mechanics, 2019, 109, 189-203.	1.4	14
23	Capturing the dynamical transitions in the flow-field of a flapping foil using Immersed Boundary Method. Journal of Fluids and Structures, 2020, 95, 102999.	1.5	14
24	Dynamical Stability Analysis of a Fluid Structure Interaction System Using a High Fidelity Navier-stokes Solver. Procedia Engineering, 2016, 144, 883-890.	1.2	13
25	Stochastic model order reduction in randomly parametered linear dynamical systems. Applied Mathematical Modelling, 2017, 51, 744-763.	2.2	13
26	Effect of stochastic parametric noise on vortex induced vibrations. International Journal of Mechanical Sciences, 2019, 153-154, 103-118.	3.6	13
27	A model order reduction technique for systems with nonlinear frequency dependent damping. Applied Mathematical Modelling, 2020, 77, 1662-1678.	2.2	13
28	Reconstruction of 2-D porous media using Karhunen-L�ve expansion. Probabilistic Engineering Mechanics, 2013, 32, 56-65.	1.3	11
29	Frequency characteristics and phase dynamics of a stochastic vortex induced vibration system. Journal of Sound and Vibration, 2021, 509, 116230.	2.1	9
30	A numerical technique to predict periodic and quasi-periodic response of nonlinear dynamic systems. Computers and Structures, 2003, 81, 1383-1393.	2.4	8
31	Dynamics of Flexible Structures With Nonlinear Joints. Journal of Vibration and Acoustics, Transactions of the ASME, 2004, 126, 92-100.	1.0	8
32	Model order reduction of unsteady flow past oscillating airfoil cascades. Journal of Fluids and Structures, 2004, 19, 239-247.	1.5	7
33	Comparing Pure-Pitch and Pure-Plunge Kinematics for a Symmetric Airfoil. AIAA Journal, 2010, 48, 2962-2969.	1.5	7
34	Uncertainty quantification of subcritical bifurcations. Probabilistic Engineering Mechanics, 2013, 34, 177-188.	1.3	7
35	Dynamical Behavior of Unsteady Flowfield of an Elastically Mounted Flapping Airfoil. AIAA Journal, 2018, 56, 2062-2069.	1.5	7
36	Uncertainties in blade flutter damage prediction under random gust. Probabilistic Engineering Mechanics, 2014, 36, 45-55.	1.3	6

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37	Bifurcation and response analysis of a nonlinear flexible rotating disc immersed in bounded compressible fluid. Journal of Sound and Vibration, 2017, 392, 260-279.	2.1	5
38	Reduced order modelling in stochastically parametered acousto-elastic system using arbitrary PCE based SEREP. Probabilistic Engineering Mechanics, 2018, 52, 1-14.	1.3	5
39	Boundary Layer Impedance model to analyse the visco-thermal acousto-elastic interactions in centrifugal compressors. Journal of Fluids and Structures, 2018, 81, 179-200.	1.5	5
40	Multiplicative noise induced intermittency in maps. International Journal of Non-Linear Mechanics, 2019, 117, 103251.	1.4	5
41	Effect of fast parametric excitation on the instability behaviour of a spinning disc bounded in a compressible fluid-filled enclosure. Nonlinear Dynamics, 2019, 96, 2257-2279.	2.7	5
42	Period-Doubling Phenomenon Observed in the Dynamic Stall Vortex Patterns. AIAA Journal, 2007, 45, 1786-1791.	1.5	4
43	Uncertainty Quantification and Bifurcation Behavior of an Aeroelastic System. , 2010, , .		4
44	Acousto-Elastic Interactions in High-Pressure CO2 Centrifugal Compressors. Journal of Vibration and Acoustics, Transactions of the ASME, 2017, 139, .	1.0	4
45	An efficient stochastic framework to propagate the effect of the random solid-pore geometry of porous media on the pore-scale flow. Computer Methods in Applied Mechanics and Engineering, 2017, 315, 73-99.	3.4	4
46	Effect of gusty inflow on the jet-switching characteristics of a plunging foil. Physics of Fluids, 2020, 32, .	1.6	4
47	Transition boundaries and an order-to-chaos map for the flow field past a flapping foil. Journal of Fluid Mechanics, 2022, 942, .	1.4	3
48	Stall Induced Vibration and Flutter in a Symmetric Airfoil. , 2006, , 359.		2
49	Comparison of Fundamental Flapping Kinematics of an Airfoil. , 2009, , .		2
50	Reduced Order Models in Analysis of Stochastically Parametered Linear Dynamical Systems. Procedia Engineering, 2016, 144, 1325-1331.	1.2	2
51	Stochastic Reduced Order Modelling of a Fluid Structure Interaction System. Procedia Engineering, 2016, 144, 1213-1219.	1.2	2
52	Uncertainty Quantification of Subcritical Nonlinear Aeroelastic System Using Integrated Interpolation Method and Polynomial Chaos Expansion. Procedia Engineering, 2016, 144, 982-989.	1.2	2
53	Transient and Stable Chaos in Dipteran Flight Inspired Flapping Motion. Journal of Computational and Nonlinear Dynamics, 2018, 13, .	0.7	2
54	Uncertainty Quantification of a Non-linear Rotating Plate Behavior in Compressible Fluid Medium. Procedia Engineering, 2016, 144, 974-981.	1.2	1

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55	Numerical Investigations on Intermittency Route to Aeroelastic Flutter. <i>Procedia Engineering</i> , 2016, 144, 967-973.	1.2	1
56	Propagation of Parametric Uncertainties in a Nonlinear Aeroelastic System Using an Improved Adaptive Sparse Grid Quadrature Routine. <i>ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering</i> , 2018, 4, .	0.7	1
57	Bifurcation analysis of an accelerating disc immersed in a bounded compressible medium near principal parametric resonance. <i>International Journal of Non-Linear Mechanics</i> , 2018, 101, 77-85.	1.4	1
58	Intermittency in a cantilever plate in a randomly fluctuating fluid flow. <i>Journal of Fluids and Structures</i> , 2020, 93, 102855.	1.5	1
59	Intermittency in a Pitch-Plunge Aeroelastic System. <i>Energy, Environment, and Sustainability</i> , 2020, , 171-194.	0.6	1
60	Intermittency Behaviour in the Flow Past an Oscillating Airfoil. , 2015, , .		0
61	Bifurcations and Uncertainty Quantifications in Nonlinear Acousto-Elastic Systems. , 2016, , .		0
62	Flexible flapping wings can exhibit quasi-periodic motion!. <i>Journal of Physics: Conference Series</i> , 2016, 759, 012082.	0.3	0
63	Uncertainty Quantification in Aeroelastic Problems. , 2016, , 151-180.		0
64	Quasi-periodic Vortical Signature of an Elastically Mounted Flapping Airfoil. , 2017, , .		0
65	Response dynamics of a freely oscillating cylinder under the effect of noise. <i>Procedia Engineering</i> , 2017, 199, 1320-1325.	1.2	0
66	Response Analysis of a Circular Cylinder Undergoing Vortex Induced Vibrations Along Two Degrees of Freedom in the Presence of Noise. , 2017, , .		0
67	Stochastic Bifurcations of a Nonlinear Acousto-Elastic System. <i>ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering</i> , 2018, 4, .	0.7	0
68	Transitional Flow Dynamics Past a Passively Flapping Airfoil in Gusty Flow. <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , 2021, , 135-148.	0.2	0
69	Model Order Reduction of Visco-Thermal Acousto-Elastic Interaction in High-Pressure Centrifugal Compressors. , 2015, , .		0
70	Nonlinear Dynamics of Circular Cylinders Undergoing Vortex Induced Vibrations in Presence of Stochastic Noise. <i>Energy, Environment, and Sustainability</i> , 2020, , 195-214.	0.6	0
71	Vibration Energy Harvesting in Fluctuating Fluid Flows. <i>Energy, Environment, and Sustainability</i> , 2020, , 215-236.	0.6	0
72	Fluid-Structure Interaction Dynamics of a Flexible Foil in Low Reynolds Number Flows. <i>Lecture Notes in Mechanical Engineering</i> , 2020, , 449-459.	0.3	0