Soumitro Banerjee

List of Publications by Citations

114 papers	2,825 citations	26 h-index	50 g-index
125 ext. papers	3,251 ext. citations	3.4 avg, IF	5.24 L-index

#	Paper	IF	Citations
114	Nonlinear Phenomena in Power Electronics: Bifurcations, Chaos, Control, and Applications **2001**,		400
113	Robust Chaos. *Physical Review Letters*, **1998**, 80, 3049-3052	7.4	210
112	Border collision bifurcations in two-dimensional piecewise smooth maps. *Physical Review E*, **1999**, 59, 4052-4061	2.4	195
111	Stability Analysis of the Continuous-Conduction-Mode Buck Converter Via Filippov's Method. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2008**, 55, 1084-1096	3.9	150
110	Experimental study of impact oscillator with one-sided elastic constraint. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2008**, 366, 679-704	3	96
109	Bifurcation analysis of an impact oscillator with a one-sided elastic constraint near grazing. *Physica D: Nonlinear Phenomena*, **2010**, 239, 312-321	3.3	88
108	BORDER-COLLISION BIFURCATIONS IN ONE-DIMENSIONAL DISCONTINUOUS MAPS. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2003**, 13, 3341-3351	2	87
107	Application of Filippov method for the analysis of subharmonic instability in dc–dc converters. *International Journal of Circuit Theory and Applications*, **2009**, 37, 899-919	2	83
106	Border collision route to quasiperiodicity: Numerical investigation and experimental confirmation. *Chaos*, **2006**, 16, 023122	3.3	73
105	Multi-parametric bifurcations in a piecewise-linear discontinuous map. *Nonlinearity*, **2006**, 19, 1875-1906	1.7	70
104	Bifurcation Analysis of PWM-1 Voltage-Mode-Controlled Buck Converter Using the Exact Discrete Model. *IEEE Transactions on Circuits and Systems Part 1: Regular Papers*, **2007**, 54, 1120-1130		69
103	Border collision bifurcations in a soft impact system. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2006**, 354, 281-287	2.3	58
102	A Current-Controlled Tristate Boost Converter With Improved Performance Through RHP Zero Elimination. *IEEE Transactions on Power Electronics*, **2009**, 24, 776-786	7.2	57
101	COMPLEX DYNAMICS OF BILINEAR OSCILLATOR CLOSE TO GRAZING. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2010**, 20, 3801-3817	2	49
100	The nature of the normal form map for soft impacting systems. *International Journal of Non-Linear Mechanics*, **2008**, 43, 504-513	2.8	49
99	Control of Fast Scale Bifurcations in Power-Factor Correction Converters. *IEEE Transactions on Circuits and Systems Part 2: Express Briefs*, **2007**, 54, 805-809		48
98	Complex Interaction Between Tori and Onset of Three-Frequency Quasi-Periodicity in a Current Mode Controlled Boost Converter. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2012**, 59, 207-214	3.9	47

97	Invisible grazings and dangerous bifurcations in impacting systems: the problem of narrow-band chaos. *Physical Review E*, **2009**, 79, 037201	2.4	45
96	. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2010**, 57, 1793-1801	3.9	40
95	Stability of a boost converter fed from photovoltaic source. *Solar Energy*, **2013**, 98, 458-471	6.8	37
94	Singularities in soft-impacting systems. *Physica D: Nonlinear Phenomena*, **2012**, 241, 553-565	3.3	33
93	Simulation of Real World Circuits: Extending Conventional Analysis Methods to Circuits Described by Heterogeneous Languages. *IEEE Circuits and Systems Magazine*, **2014**, 14, 51-70	3.2	30
92	Local directional ZigZag pattern: A rotation invariant descriptor for texture classification. *Pattern Recognition Letters*, **2018**, 108, 23-30	4.7	29
91	Codimension-three bifurcations: explanation of the complex one-, two-, and three-dimensional bifurcation structures in nonsmooth maps. *Physical Review E*, **2007**, 75, 066205	2.4	28
90	Dangerous bifurcation at border collision: when does it occur?. *Physical Review E*, **2005**, 71, 057202	2.4	28
89	Impact of a Frequency Modulated Pulsewidth Modulation (PWM) Switching Converter on the Input Power System Quality. *IEEE Transactions on Power Electronics*, **2010**, 25, 1450-1459	7.2	27
88	Nonlinear Analysis of Discretization Effects in a Digital Current Mode Controlled Boost Converter. *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, **2015**, 5, 336-344	5.2	26
87	Nonlinear Dynamics and Bifurcation Analysis of a Boost Converter for Battery Charging in Photovoltaic Applications. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2014**, 24, 1450142	2	25
86	Sufficient conditions for asymptotic stability and stabilization of autonomous fractional order systems. *Communications in Nonlinear Science and Numerical Simulation*, **2018**, 56, 365-379	3.7	24
85	On the existence of low-period orbits in n-dimensional piecewise linear discontinuous maps. *Nonlinear Dynamics*, **2008**, 53, 369-380	5	23
84	Influence of a square-root singularity on the behaviour of piecewise smooth maps. *Nonlinearity*, **2010**, 23, 445-463	1.7	22
83	Border collision bifurcations at the change of state-space dimension. *Chaos*, **2002**, 12, 1054-1069	3.3	22
82	Transitions from phase-locked dynamics to chaos in a piecewise-linear map. *Physical Review E*, **2008**, 77, 026206	2.4	21
81	A New Algorithm for Small-Signal Analysis of DC DC Converters. *IEEE Transactions on Industrial Informatics*, **2014**, 10, 628-636	11.9	20
80	Nonlinear stability analysis and a new design methodology for a PEM fuel cell fed DC DC boost converter. *International Journal of Hydrogen Energy*, **2012**, 37, 18205-18215	6.7	20

79	Bifurcation phenomena in two-dimensional piecewise smooth discontinuous maps. *Chaos*, **2010**, 20, 033101	3.9	20
78	Achieving Monotonic Variation of Spectral Composition in DC-DC Converters Using Pulse Skipping Modulation. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2011**, 58, 1958-1966	3.9	20
77	MULTIPLE-ATTRACTOR BIFURCATIONS AND QUASIPERIODICITY IN PIECEWISE-SMOOTH MAPS. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2008**, 18, 1775-1789	2	20
76	Symmetry-Breaking Bifurcation in Series-Parallel Load Resonant DC-DC Converters. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2013**, 60, 778-787	3.9	19
75	Fractal image compression using upper bound on scaling parameter. *Chaos, Solitons and Fractals*, **2018**, 106, 16-22	9.3	19
74	Control of chaos in piecewise linear systems with switching nonlinearity. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1995**, 200, 115-120	2.3	17
73	Asymptotic stability and stabilization of a class of nonautonomous fractional order systems. *Nonlinear Dynamics*, **2016**, 85, 167-177	5	15
72	Fast-scale stability limits of a two-stage boost power converter. *International Journal of Circuit Theory and Applications*, **2016**, 44, 1127-1141	2	14
71	Occurrence of multiple attractor bifurcations in the two-dimensional piecewise linear normal form map. *Nonlinear Dynamics*, **2012**, 67, 293-307	5	13
70	Foldings and grazings of tori in current controlled interleaved boost converters. *International Journal of Circuit Theory and Applications*, **2014**, 42, 1080-1091	2	13
69	Character of the map for switched dynamical systems for observations on the switching manifold. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2008**, 372, 4234-4240	2.3	13
68	Synchronization Phenomena in Interconnected Power Electronic Systems. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2016**, 63, 221-225	3.5	12
67	LOCAL AND GLOBAL BIFURCATIONS IN THREE-DIMENSIONAL, CONTINUOUS, PIECEWISE SMOOTH MAPS. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2011**, 21, 1617-1636	2	12
66	Vanishing singularity in hard impacting systems. *Discrete and Continuous Dynamical Systems - Series B*, **2011**, 16, 319-332	1.3	12
65	Complex non-linear phenomena and stability analysis of interconnected power converters used in distributed power systems. *IET Power Electronics*, **2016**, 9, 855-863	2.2	12
64	Synchronization Phenomena in Microgrids With Capacitive Coupling. *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, **2015**, 5, 364-371	5.2	11
63	Bifurcations and chaos in the tolerance band PWM technique. *IEEE Transactions on Circuits and Systems Part 1: Regular Papers*, **2000**, 47, 254-259		11
62	Border-collision bifurcations in a generalized piecewise linear-power map. *Discrete and Continuous Dynamical Systems - Series B*, **2011**, 16, 547-567	1.3	10

61	Bifurcation of Quasiperiodic Orbit in a 3D Piecewise Linear Map. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2017**, 27, 1730033	2	9
60	Bifurcation analysis of an inductorless chaos generator using 1D piecewise smooth map. *Mathematics and Computers in Simulation*, **2014**, 95, 137-145	3.3	9
59	Non-linear modelling and stability analysis of resonant DC⎯DC converters. *IET Power Electronics*, **2015**, 8, 2492-2503	2.2	9
58	Does shining light on gold colloids influence aggregation?. *Scientific Reports*, **2014**, 4, 5213	4.9	8
57	Period increment cascades in a discontinuous map with square-root singularity. *Discrete and Continuous Dynamical Systems - Series B*, **2010**, 14, 961-976	1.3	8
56	Fractal Image Compression using Hierarchical Classification of Sub-images **2015**,		8
55	Dangerous Bifurcations Revisited. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2016**, 26, 1630040	2	8
54	Chaos-Modulated Ramp IC for EMI Reduction in PWM Buck Converters Design and Analysis of Critical Issues **2008**,		7
53	Modeling and analysis of DC-DC converters under Pulse Skipping Modulation **2008**,		7
52	Measurement of Van der Waals force using oscillating optical tweezers. *Applied Physics Letters*, **2019**, 115, 123701	3.4	6
51	Avoiding instabilities in power electronic systems: toward an on-chip implementation. *IET Power Electronics*, **2017**, 10, 1778-1787	2.2	6
50	Experimental Observation of Multiple Attractor Bifurcation in an Electronic Circuit. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2018**, 65, 1254-1258	3.5	6
49	Dynamical behaviors in time-delay systems with delayed feedback and digitized coupling. *Chaos, Solitons and Fractals*, **2014**, 69, 188-200	9.3	6
48	Analysis of Discontinuity Induced Bifurcations in a Dual Input DC-DC Converter. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2015**, 25, 1550071	2	6
47	Dynamical analysis of single-inductor dual-output DC-DC converters **2013**,		6
46	Voltage controlled pulse skipping modulation: Extension towards the ultra light load **2009**,		6
45	Two-mode dynamics in pulse-modulated control systems. *Annual Reviews in Control*, **2010**, 34, 62-70	10.3	6
44	Sliding mode dynamics on a prey⎯predator system with intermittent harvesting policy. *Nonlinear Dynamics*, **2019**, 98, 1299-1314	5	5

43	Piecewise Quadratic Slope Compensation Technique for DC-DC Switching Converters. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2020**, 67, 5574-5585	3.9	5
42	Torus destruction via global bifurcations in a piecewise-smooth, continuous map with square-root nonlinearity. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2009**, 373, 4426-4433	2.3	5
41	A novel current controlled tri-state boost converter with superior dynamic performance **2008**,		5
40	Is the Knowledge about Bifurcation and Chaos in Power Electronics Useful in Practice? **2006**,		5
39	Dynamics of a piecewise smooth map with singularity. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2005**, 337, 87-92	2.3	5
38	Nordmark map and the problem of large-amplitude chaos in impact oscillators. *Physical Review E*, **2020**, 102, 022211	2.4	5
37	Why does narrow band chaos in impact oscillators disappear over a range of frequencies?. *Nonlinear Dynamics*, **2016**, 86, 2017-2022	5	5
36	Using YY supermales to destabilize invasive fish populations. *Theoretical Population Biology*, **2020**, 134, 1-14	1.2	4
35	Torus destruction in a nonsmooth noninvertible map. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2012**, 376, 400-406	2.3	4
34	LOCAL BIFURCATIONS OF A QUASIPERIODIC ORBIT. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2012**, 22, 1250289	2	4
33	Control of switching circuits using complete-cycle solution matrices **2006**,		4
32	. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2018**, 65, 2221-2231	3.9	3
31	Adaptive identification of sparse systems with variable sparsity **2011**,		3
30	Stability of switching circuits using complete-cycle solution matrices **2006**,		3
29	Dynamics of a Filippov predator-prey system with stage-specific intermittent harvesting. *Nonlinear Dynamics*, **2021**, 105, 1019-1043	5	3
28	Stellar mid-life crisis: subcritical magnetic dynamos of solar-like stars and the breakdown of gyrochronology. *Monthly Notices of the Royal Astronomical Society: Letters*, **2021**, 506, L50-L54	4.3	3
27	Robust chaos in 3-D piecewise linear maps. *Chaos*, **2018**, 28, 123101	3.3	3
26	Effect of stochastically moving border on basins of attraction in a class of piecewise smooth maps. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2017**, 381, 2161-2166	2.3	2

25	Relationship of fast-scale and slow-scale instabilities in switching circuit with multiple inputs. *International Journal of Circuit Theory and Applications*, **2017**, 45, 1382-1396	2	2
24	Hyperchaos in 3-D piecewise smooth maps. *Chaos, Solitons and Fractals*, **2020**, 133, 109681	9.3	2
23	Enhanced Stability Caused by a One-Cycle Delay in a Digital Current-Mode Controlled Buck Converter. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2018**, 65, 1979-1983	3.5	2
22	Chaos, coexisting attractors, and fractal basin boundaries in DC drives with full-bridge converter **2010**,		2
21	Existence of chaos in a piecewise smooth two-dimensional contractive map. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2009**, 373, 2922-2926	2.3	2
20	ONE-DIMENSIONAL DISCONTINUOUS MAP ANALYSIS OF DC–DC CONVERTERS UNDER VOLTAGE CONTROLLED PULSE SKIPPING MODULATION. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2012**, 22, 1250049	2	2
19	Bifurcations in frequency controlled load resonant DC-DC converters **2012**,		2
18	Period Increment Cascades in a Discontinuous Map with Square-Root Singularity*. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2009**, 42, 160-165		2
17	Stability analysis and control of bifurcations of parallel connected DC/DC converters using the monodromy matrix **2008**,		2
16	MULTIPLE ATTRACTOR BIFURCATIONS IN A PIECEWISE-SMOOTH MAP WITH QUASIPERIODICITY. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2006**, 39, 427-432		2
15	Electronic circuit equivalent of a mechanical impacting system. *Nonlinear Dynamics*, **2020**, 99, 3113-3121	5	2
14	Parameter estimation for 1D PWL chaotic maps using noisy dynamics. *Nonlinear Dynamics*, **2018**, 94, 2979-2993	5	2
13	Shilnikov-type dynamics in three-dimensional piecewise smooth maps. *Chaos, Solitons and Fractals*, **2020**, 133, 109655	9.3	1
12	Improving load regulation in current mode control through inductor current filtering. *International Journal of Power Electronics*, **2012**, 4, 71	0.2	1
11	Bifurcation behavior of a boost converter under voltage controlled pulse skipping modulation in the light of 1-D discontinuous map model **2010**,		1
10	RHP zero elimination with near optimum regulation in a current controlled tri-state boost converter through inductor current filtering **2010**,		1
9	Dynamics of a system of coupled inverted pendula with vertical forcing. *Chaos, Solitons and Fractals*, **2020**, 141, 110358	9.3	1
8	Local and global bifurcations in 3D piecewise smooth discontinuous maps. *Chaos*, **2021**, 31, 013126	3.3	0

7 The Behavior of Synchronized Frequency in Weakly Coupled Nonidentical Periodic Oscillators. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2017**, 27, 1750008   2

6 Limiting distribution of periodic position measurements of a quantum harmonic oscillator. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2020**, 384, 126397   2.3

5 Circle Like Strange Attractor in a Piecewise Smooth Map*. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 81-86

4 Transmission of Binary Information with a Chaos Coded Communication System using QDPSK-Modulation. *Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences*, **1998**, 53, 1022-1028   1.4

3 New Undergraduate Laboratory Experiments on Induction Generators. *International Journal of Electrical Engineering and Education*, **1992**, 29, 163-168   0.6

2 Almost Super Stable Periodic Orbit in an Electric Impact Oscillator. *IEICE Proceeding Series*, **2014**, 1, 832-835

1 Image Denoising Using Fractal Hierarchical Classification. *Communications in Computer and Information Science*, **2018**, 631-645   0.3