# S Behnia

## List of Publications by Year in descending order



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|---|---|---|---|
| 97 papers | 1,571 citations | 430874 18 h-index | 315739 38 g-index |
| 99 all docs | 99 docs citations | 99 times ranked | 859 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | A novel algorithm for image encryption based on mixture of chaotic maps. Chaos, Solitons and Fractals, 2008, 35, 408-419. | 5.1 | 349 |
| 2 | A fast chaotic encryption scheme based on piecewise nonlinear chaotic maps. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 366, 391-396. | 2.1 | 200 |
| 3 | A novel scheme for image encryption based on 2D piecewise chaotic maps. Optics Communications, 2010, 283, 3259-3266. | 2.1 | 127 |
| 4 | Hierarchy of Chaotic Maps with an Invariant Measure. Journal of Statistical Physics, 2001, 104, 1013-1028. | 1.2 | 48 |
| 5 | Suppressing chaotic oscillations of a spherical cavitation bubble through applying a periodic perturbation. Ultrasonics Sonochemistry, 2009, 16, 502-511. | 8.2 | 43 |
| 6 | Nonlinear transitions of a spherical cavitation bubble. Chaos, Solitons and Fractals, 2009, 41, 818-828. | 5.1 | 42 |
| 7 | Image encryption based on the Jacobian elliptic maps. Journal of Systems and Software, 2013, 86, 2429-2438. | 4.5 | 37 |
| 8 | Applications of tripled chaotic maps in cryptography. Chaos, Solitons and Fractals, 2009, 40, 505-519. | 5.1 | 34 |
| 9 | Towards classification of the bifurcation structure of a spherical cavitation bubble. Ultrasonics, 2009, 49, 605-610. | 3.9 | 32 |
| 10 | Hash function based on hierarchy of 2D piecewise nonlinear chaotic maps. Chaos, Solitons and Fractals, 2009, 42, 2405-2412. | 5.1 | 31 |
| 11 | Multiple-watermarking scheme based on improved chaotic maps. Communications in Nonlinear Science and Numerical Simulation, 2010, 15, 2469-2478. | 3.3 | 31 |
| 12 | A novel dynamic model of pseudo random number generator. Journal of Computational and Applied Mathematics, 2011, 235, 3455-3463. | 2.0 | 30 |
| 13 | CHAOTIC CRYPTOGRAPHIC SCHEME BASED ON COMPOSITION MAPS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2008, 18, 251-261. | 1.7 | 28 |
| 14 | Hierarchy of chaotic maps with an invariant measure and their coupling. Physica D: Nonlinear Phenomena, 2001, 159, 1-21. | 2.8 | 27 |
| 15 | DNA Spintronics: Charge and Spin Dynamics in DNA Wires. Journal of Physical Chemistry C, 2016, 120, 2973-2983. | 3.1 | 27 |
| 16 | Influence of Stacking Sequence and Notch Angle on the Charpy Impact Behavior of Hybrid Composites. Mechanics of Composite Materials, 2016, 52, 489-496. | 1.4 | 22 |
| 17 | Watermarking based on discrete wavelet transform and q -deformed chaotic map. Chaos, Solitons and Fractals, 2017, 104, 6-17. | 5.1 | 20 |
| 18 | Observations on the dynamics of bubble cluster in an ultrasonic field. Nonlinear Dynamics, 2013, 72, 561-574. | 5.2 | 18 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | A novel method for controlling chaos in external cavity semiconductor laser. Optik, 2013, 124, 757-764. | 2.9 | 18 |
| 20 | Hierarchy of Chaotic Maps with an Invariant Measure and their Compositions. Journal of Nonlinear Mathematical Physics, 2002, 9, 26. | 1.3 | 17 |
| 21 | Slaveâ€“master dynamics of semiconductor laser with short external cavity. Optics Communications, 2011, 284, 3018-3029. | 2.1 | 17 |
| 22 | Chaotic behavior of gas bubble in non-Newtonian fluid: a numerical study. Nonlinear Dynamics, 2013, 74, 559-570. | 5.2 | 16 |
| 23 | Multifractal properties of denaturation process based on Peyrardâ€“Bishop model. Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 2538-2547. | 2.1 | 15 |
| 24 | Modeling the electrical conduction in DNA nanowires: Charge transfer and lattice fluctuation theories. Physical Review E, 2015, 91, 022719. | 2.1 | 15 |
| 25 | Engineering DNA Molecule Bridge between Metal Electrodes for High-Performance Molecular Transistor: An Environmental Dependent Approach. Journal of Physical Chemistry B, 2018, 122, 2487-2494. | 2.6 | 15 |
| 26 | Controlling charge current through a DNA based molecular transistor. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 36-43. | 2.1 | 14 |
| 27 | Control of a DNA Based Piezoelectric Biosensor. Journal of the Physical Society of Japan, 2020, 89, 024004. | 1.6 | 14 |
| 28 | Multifractal analysis of thermal denaturation based on the Peyrard-Bishop-Dauxois model. Physical Review E, 2011, 84, 031918. | 2.1 | 13 |
| 29 | PSEUDO RANDOM NUMBER GENERATOR BASED ON SYNCHRONIZED CHAOTIC MAPS. International Journal of Modern Physics C, 2010, 21, 275-290. | 1.7 | 12 |
| 30 | Design and implementation of coupled chaotic maps in watermarking. Applied Soft Computing Journal, 2014, 21, 481-490. | 7.2 | 12 |
| 31 | Hierarchy of one- and many-parameter families of elliptic chaotic maps of cn and sn types. Physics Letters, Section A: General, Atomic and Solid State Physics, 2003, 310, 168-176. | 2.1 | 11 |
| 32 | Modeling spin selectivity in charge transfer across the DNA/Gold interface. Chemical Physics, 2016, 477, 61-73. | 1.9 | 11 |
| 33 | Cryptography based on chaotic random maps with position dependent weighting probabilities. Chaos, Solitons and Fractals, 2009, 40, 362-369. | 5.1 | 10 |
| 34 | Reconfigurable chaotic logic gates based on novel chaotic circuit. Chaos, Solitons and Fractals, 2014, 69, 74-80. | 5.1 | 10 |
| 35 | Light-Driven Modulation of Electrical Current through DNA Sequences: Engineering of a Molecular Optical Switch. Journal of Physical Chemistry B, 2020, 124, 3261-3270. | 2.6 | 9 |
| 36 | Finite-element simulation of ultrasound brain surgery: effects of frequency, focal pressure, and scanning path in bone-heating reduction. Open Physics, 2008, 6, . | 1.7 | 8 |

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|---|---|---|---|
| 37 | Molecular thermal transistor: Dimension analysis and mechanism. Chemical Physics, 2018, 505, 40-46. | 1.9 | 8 |
| 38 | Quantum Chaotic Behavior in Zigzag Graphene Nanoribbon: Effect of Impurity and Electric Field. Journal of the Physical Society of Japan, 2018, 87, 114602. | 1.6 | 8 |
| 39 | Creation of S-box based on a hierarchy of Julia sets: image encryption approach. Multidimensional Systems and Signal Processing, 2022, 33, 39-62. | 2.6 | 8 |
| 40 | Stability analysis in nuclear reactor using Lyapunov exponent. Annals of Nuclear Energy, 2008, 35, 1370-1372. | 1.8 | 7 |
| 41 | Mean Lyapunov exponent approach for the helicoidal Peyrardâ€“Bishop model. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 3574-3578. | 2.1 | 7 |
| 42 | Designing thermal diode and heat pump based on DNA nanowire: Multifractal approach. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 2077-2084. | 2.1 | 7 |
| 43 | Effect of electric field on the electrical conductivity of defected carbon nanotube: Multifractal properties of the wavefunctions. Physics Letters, Section A: General, Atomic and Solid State Physics, 2018, 382, 3274-3280. | 2.1 | 7 |
| 44 | Observations on the dynamics of external cavity semiconductor lasers. Optik, 2012, 123, 1555-1561. | 2.9 | 6 |
| 45 | Effect of magnetic field on the radial pulsations of a gas bubble in a non-Newtonian fluid. Chaos, Solitons and Fractals, 2015, 78, 194-204. | 5.1 | 6 |
| 46 | Hierarchy of random chaotic maps with an invariant measure. Journal of Mathematical Physics, 2003, 44, 5386-5400. | 1.1 | 5 |
| 47 | A novel approach for the potential parameters selection of Peyrardâ€“Bishop model. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 1092-1096. | 2.1 | 5 |
| 48 | Characterization of Intermittency in Hierarchy of Chaotic Maps with Invariant Measure. Journal of the Physical Society of Japan, 2012, 81, 124008. | 1.6 | 5 |
| 49 | Image encryption based on quantum chaotic map and FSM transforms. , 2012, , . | | 5 |
| 50 | An electric field induced delocalization transition in second-harmonic generation effect. Optical and Quantum Electronics, 2017, 49, 1. | 3.3 | 5 |
| 51 | Presence of dynamics of quantum dots in the digital signature using DNA alphabet and chaotic S-box. Multimedia Tools and Applications, 2021, 80, 10509-10531. | 3.9 | 5 |
| 52 | Molecular spin switch triggered by voltage and magnetic field: towards DNA-based molecular devices. Physica Scripta, 2022, 97, 055005. | 2.5 | 5 |
| 53 | Hierarchy of piecewise non-linear maps with non-ergodic behaviour. Journal of Physics A, 2004, 37, 9403-9417. | 1.6 | 4 |
| 54 | Generalized N-coupled maps with invariant measure in Bose-Mesner algebra perspective. Pramana - Journal of Physics, 2008, 70, 417-438. | 1.8 | 4 |

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|---|---|---|---|
| 55 | Dynamical control of chaos by slaveâ€“master feedback. Chaos, Solitons and Fractals, 2009, 42, 2105-2114. | 5.1 | 4 |
| 56 | A new colour image watermarking scheme using Cellular Automata Transform and Schur decomposition. , 2013, , . | | 4 |
| 57 | A new approach to the study of heartbeat dynamics based on mathematical model. , 2013, , . | | 4 |
| 58 | Intelligent controlling microbubble radial oscillations by using Slaveâ€“Master Feedback control. Applied Mathematics and Computation, 2014, 245, 404-415. | 2.2 | 4 |
| 59 | Metal-insulator transition in a disordered nanotube. Chaos, Solitons and Fractals, 2017, 99, 101-108. | 5.1 | 4 |
| 60 | Modulation of spin transport in DNA-based nanodevices by temperature gradient: A spin caloritronics approach. Chaos, Solitons and Fractals, 2018, 116, 8-13. | 5.1 | 4 |
| 61 | Synchronization in pair-coupled maps with invariant measure. Communications in Nonlinear Science and Numerical Simulation, 2009, 14, 2916-2922. | 3.3 | 3 |
| 62 | Controlling Chaos in Damped and Driven Morse Oscillator via Slave-Master Feedback. Acta Physica Polonica A, 2013, 123, 7. | 0.5 | 3 |
| 63 | DNA in a Dissipative Environment: A Charge Transfer Approach. Journal of the Physical Society of Japan, 2015, 84, 084002. | 1.6 | 3 |
| 64 | Association schemes perspective of microbubble cluster in ultrasonic fields. Ultrasonics Sonochemistry, 2018, 44, 45-52. | 8.2 | 3 |
| 65 | Detecting a pronounced delocalized state in third-harmonic generation phenomenon; a quantum chaos approach. Optics Communications, 2018, 416, 19-24. | 2.1 | 3 |
| 66 | Digital Signature: Quantum Chaos Approach and Bell States. Springer Proceedings in Complexity, 2019, , 85-93. | 0.3 | 3 |
| 67 | Study of encapsulated microbubble cluster based on association schemes perspective. Ultrasonics Sonochemistry, 2019, 52, 131-141. | 8.2 | 3 |
| 68 | Numerical study on a polymer-shelled microbubble submerged in soft tissue. Physica Scripta, 2020, 95, 085215. | 2.5 | 3 |
| 69 | Global Synchronization & Anti-Synchronization inÂN-Coupled Map Lattices. International Journal of Theoretical Physics, 2008, 47, 1005-1015. | 1.2 | 2 |
| 70 | A NOVEL SCHEME FOR IMAGE ENCRYPTION BASED ON A SYNCHRONIZED COUPLED MAP. International Journal of Modern Physics B, 2010, 24, 5635-5651. | 2.0 | 2 |
| 71 | Generalization of the analytical solution of neutron point kinetics equations with time-dependent external source. Iranian Physical Journal, 2014, 8, 211-218. | 1.2 | 2 |
| 72 | Ballistic induced pumping of hypersonic heat current in DNA nano wire. European Physical Journal B, 2016, 89, 1. | 1.5 | 2 |

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|---|---|---|---|
| 73 | Dynamics of Charge Transfer in DNA Wires: A Protonâ€“Coupled Approach. Journal of the Physical Society of Japan, 2017, 86, 124006. | 1.6 | 2 |
| 74 | Manifestation of quantum chaos in second-harmonic generation. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 2882-2886. | 2.1 | 2 |
| 75 | Quantum chaos analysis for characterizing a photonic resonator lattice. Chaos, Solitons and Fractals, 2018, 109, 154-159. | 5.1 | 2 |
| 76 | Controlling of the light in photonic resonator lattice: Quantum chaos approach. Optics Communications, 2019, 446, 171-177. | 2.1 | 2 |
| 77 | Dynamical stabilities of photosynthesis systems: Quantum chaos approach. Chaos, Solitons and Fractals, 2020, 139, 110279. | 5.1 | 2 |
| 78 | Industrialising a proof-based verification approach of computerised interlocking systems. WIT Transactions on the Built Environment, 2008, , . | 0.0 | 2 |
| 79 | Quantum chaos approach in exciton energy transfer in a photosynthetic system. Physica Scripta, 2021, 96, 025203. | 2.5 | 2 |
| 80 | Construction of S-box based on chaotic piecewise map: Watermark application. Multimedia Tools and Applications, 2023, 82, 1131-1148. | 3.9 | 2 |
| 81 | Chaotic control of the dynamical behavior of COVID-19 through the electromagnetic fields. Physica Scripta, 2022, 97, 085008. | 2.5 | 2 |
| 82 | A Novel Moment Approach for Calculation of the Perronâ€“Frobenius Spectrum. International Journal of Theoretical Physics, 2007, 46, 2836-2842. | 1.2 | 1 |
| 83 | Shell closure effects on spectral statistics of calcium neutron-rich isotopes. Chinese Journal of Physics, 2019, 58, 29-37. | 3.9 | 1 |
| 84 | Organic thermoelectricity based on DNA molecules. Physica Scripta, 2020, 95, 065004. | 2.5 | 1 |
| 85 | Analyzing stability of neutron point kinetics equations with nine photo-neutron groups using Lyapunov exponent method. Iranian Journal of Physics Research, 2016, 16, 33-40. | 0.0 | 1 |
| 86 | Random number generator via hexagonal boron nitride heterostructure. Physica Scripta, 2022, 97, 035003. | 2.5 | 1 |
| 87 | Random Maps with Parameter-Dependent Probabilities. Journal of the Physical Society of Japan, 2010, 79, 124002. | 1.6 | 0 |
| 88 | Criticality calculations in a nuclear reactor by using the Lyapunov exponent method. Annals of Nuclear Energy, 2012, 43, 131-135. | 1.8 | 0 |
| 89 | Disorder-driven insulator to semi-metallic transition in a graphene nanoribbon. Physica B: Condensed Matter, 2017, 522, 22-25. | 2.7 | 0 |
| 90 | Multifractal spectrum and spectral behavior of calcium and titanium isotopes based on nuclear shell model. Chinese Physics C, 2019, 43, 114108. | 3.7 | 0 |

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|---|---|---|---|
| 91 | A quantum chaos study on the localization of light in a resonator-based photonic crystal. Optical and Quantum Electronics, 2020, 52, 1. | 3.3 | 0 |
| 92 | Study the metal-insulator transitions of bilayer graphene: Abelian group schemes approach. Superlattices and Microstructures, 2020, 142, 106498. | 3.1 | 0 |
| 93 | Bio-inspired Green Power: A Thermocurrent Generator. Transactions on Electrical and Electronic Materials, 2021, 22, 257-266. | 1.9 | 0 |
| 94 | A Chaotic Blind Digital Image Watermarking Based On Singular Value Decomposition In Spatial Domain. Journal of Mathematics and Computer Science, 2014, 13, 311-320. | 1.0 | 0 |
| 95 | Spintronics in Nano scales: An approach from DNA spin polarization. Scientia Iranica, 2017, . | 0.4 | 0 |
| 96 | Modulating the Light-Driven Conductivity in Biosystem. Springer Proceedings in Complexity, 2020, , 75-84. | 0.3 | 0 |
| 97 | Structural stability of electrical current in graphene-hexagonal boron nitride heterostructures: a quantum chaos approach. European Physical Journal Plus, 2022, 137, 1. | 2.6 | 0 |