

M S Mani Rajan

List of Publications by Year in descending order

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Version: 2024-02-01

80
papers

1,711
citations

257101

24
h-index

329751

37
g-index

82
all docs

82
docs citations

82
times ranked

689
citing authors

#	ARTICLE	IF	CITATIONS
1	Nonautonomous solitons in modified inhomogeneous Hirota equation: soliton control and soliton interaction. <i>Nonlinear Dynamics</i> , 2015, 79, 2469-2484.	2.7	115
2	Dynamics of optical soliton in a tapered erbium-doped fiber under periodic distributed amplification system. <i>Nonlinear Dynamics</i> , 2016, 85, 599-606.	2.7	68
3	Observation of two soliton propagation in an erbium doped inhomogeneous lossy fiber with phase modulation. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2013, 18, 1410-1432.	1.7	67
4	D-shaped PCF sensor based on SPR for the detection of carcinogenic agents in food and cosmetics. <i>Optik</i> , 2019, 180, 264-270.	1.4	67
5	Brewster Mode-Enhanced Sensing with Hyperbolic Metamaterial. <i>Advanced Optical Materials</i> , 2019, 7, 1900680.	3.6	64
6	Dispersion management and cascade compression of femtosecond nonautonomous soliton in birefringent fiber. <i>European Physical Journal D</i> , 2013, 67, 1.	0.6	63
7	Nonlinear tunneling of nonautonomous optical solitons in combined nonlinear Schrödinger and Maxwell-Bloch systems. <i>Journal of Optics (United Kingdom)</i> , 2012, 14, 105204.	1.0	57
8	Nonlinear tunneling of optical soliton in 3 coupled NLS equation with symbolic computation. <i>Annals of Physics</i> , 2014, 346, 1-13.	1.0	56
9	Development and analysis of surface plasmon resonance based refractive index sensor for pregnancy testing. <i>Optics and Lasers in Engineering</i> , 2021, 140, 106551.	2.0	56
10	Hydrostatic Pressure Sensor Using High Birefringence Photonic Crystal Fibers. <i>IEEE Sensors Journal</i> , 2017, 17, 650-656.	2.4	54
11	Propagation of dispersion-managed nonlinearity-managed solitons in an inhomogeneous erbium-doped fiber system. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2009, 42, 165101.	0.7	52
12	D-glucose sensor using photonic crystal fiber. <i>Optik</i> , 2017, 145, 489-494.	1.4	51
13	Few-mode ring core fiber characteristics: temperature impact. <i>Photonic Network Communications</i> , 2019, 37, 131-138.	1.4	50
14	Multi-soliton propagation in a generalized inhomogeneous nonlinear Schrödinger-Maxwell-Bloch system with loss/gain driven by an external potential. <i>Journal of Mathematical Physics</i> , 2013, 54, .	0.5	43
15	Performance evaluation of 6.4 Tbps dual polarization quadrature phase shift keying Nyquist-WDM superchannel FSO transmission link: Impact of different weather conditions. <i>AEJ - Alexandria Engineering Journal</i> , 2020, 59, 977-986.	3.4	40
16	Propagation properties of optical soliton in an erbium-doped tapered parabolic index nonlinear fiber: soliton control. <i>Nonlinear Dynamics</i> , 2017, 87, 1575-1587.	2.7	36
17	Influence of generalized external potentials on nonlinear tunneling of nonautonomous solitons: Soliton management. <i>Optical Fiber Technology</i> , 2015, 25, 44-50.	1.4	33
18	Nonlinear polarization in metal nanocomposite system based photonic crystals. <i>Optik</i> , 2019, 176, 78-84.	1.4	29

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19	Photonic Crystal Fiber-Based Reconfigurable Biosensor Using Phase Change Material. IEEE Transactions on Nanobioscience, 2021, 20, 338-344.	2.2	29
20	Graphene Oxide Effect on Improvement of Silver Surface Plasmon Resonance D-Shaped Optical Fiber Sensor. Journal of Optical Communications, 2023, 44, 53-60.	4.0	29
21	A long-haul 100 Gbps hybrid PDM/CO-OFDM FSO transmission system: Impact of climate conditions and atmospheric turbulence. AEJ - Alexandria Engineering Journal, 2021, 60, 785-794.	3.4	28
22	Hidden possibilities in soliton switching through tunneling in erbium doped birefringence fiber with higher order effects. Journal of Modern Optics, 2015, 62, 278-287.	0.6	27
23	Novel spider web photonic crystal fiber for robust mode transmission applications with supporting orbital angular momentum transmission property. Optical and Quantum Electronics, 2020, 52, 1.	1.5	27
24	Symbolic computation on tunable nonautonomous solitons in inhomogeneous NLS system with generalized external potential. Optik, 2017, 145, 240-249.	1.4	26
25	Impact of fifth order dispersion on soliton solution for higher order NLS equation with variable coefficients. Journal of Ocean Engineering and Science, 2020, 5, 205-213.	1.7	25
26	One-dimensional ring mirror-defect photonic crystal for detection of mycobacterium tuberculosis bacteria. Optik, 2020, 219, 165097.	1.4	25
27	The performance of hosting and core materials for slotted core Q-PCF in terahertz spectrum. Optik, 2019, 194, 163084.	1.4	22
28	Design of tellurite glass based quasi photonic crystal fiber with high nonlinearity. Optik, 2019, 181, 185-190.	1.4	21
29	Nonlinear tunneling of optical similaritons in a tapered graded-index nonlinear waveguide. Optics Communications, 2014, 324, 286-295.	1.0	19
30	Transition from bird to butterfly shaped nonautonomous soliton and soliton switching in erbium doped resonant fiber. Physica Scripta, 2020, 95, 105203.	1.2	19
31	Unexpected Behavior on Nonlinear Tunneling of Chirped Ultrashort Soliton Pulse in Non-Kerr Media with Raman Effect. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2016, 71, 751-758.	0.7	18
32	Numerical investigation and analysis of flattened dispersion for supercontinuum generation at very low power using Hexagonal shaped Photonic crystal fiber (H-PCF). Optik, 2019, 179, 718-725.	1.4	18
33	Soliton control with inhomogeneous dispersion under the influence of tunable external harmonic potential. Waves in Random and Complex Media, 2021, 31, 474-485.	1.6	18
34	Self-similar rogue waves in an inhomogeneous generalized nonlinear Schrödinger equation. Physics Letters, Section A: General, Atomic and Solid State Physics, 2014, 378, 2137-2141.	0.9	17
35	Design of a modified single-negative metamaterial structure for sensing application. Optik, 2019, 180, 924-931.	1.4	17
36	Influence of septic nonlinearity on modulation instability under normal and anomalous dispersion regime. Optik, 2020, 204, 164114.	1.4	17

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37	Impact of fourth order dispersion on modulational instabilities in asymmetrical three-core optical fiber. <i>Optik</i> , 2020, 215, 164758.	1.4	17
38	Numerical investigation of spiral photonic crystal fiber (S-PCF) with supporting high order OAM modes propagation for space division multiplexing applications. <i>Optical and Quantum Electronics</i> , 2021, 53, 1.	1.5	17
39	Multiple dromion excitations in sixth order NLS equation with variable coefficients. <i>Optik</i> , 2018, 158, 1179-1185.	1.4	15
40	Giant Nonlinear AlGaAs-Doped Glass Photonic Crystal Fibers for Efficient Soliton Generation at Femtojoule Energy. <i>IEEE Photonics Journal</i> , 2019, 11, 1-11.	1.0	15
41	Investigation on nonautonomous soliton management in generalized external potentials via dispersion and nonlinearity. <i>Indian Journal of Physics</i> , 2015, 89, 957-965.	0.9	14
42	Transmittance spectrum in a 1D photonic crystal composed fused silica and sea water. <i>Optik</i> , 2019, 185, 930-935.	1.4	13
43	Periodic oscillations and nonlinear tunneling of soliton for Hirota-MB equation in inhomogeneous fiber. <i>Optik</i> , 2019, 181, 440-448.	1.4	13
44	Hexagonal PCF of honeycomb lattice with high birefringence and high nonlinearity. <i>International Journal of Modern Physics B</i> , 2020, 34, 2050094.	1.0	13
45	Design of Ge ₂₀ Sb ₁₅ Se ₆₅ embedded rectangular slotted quasi photonic crystal fiber for higher nonlinearity applications. <i>Optik</i> , 2019, 184, 63-69.	1.4	12
46	Analysis of optical sensitivity of analytes in aqua solutions. <i>Optik</i> , 2019, 178, 970-977.	1.4	11
47	Different wave patterns for (2+ ϵ) dimensional Maccari's equation. <i>Nonlinear Dynamics</i> , 2022, 108, 445-456.	2.7	11
48	Controllable pulse width of bright similaritons in a tapered graded index diffraction decreasing waveguide. <i>Chaos</i> , 2016, 26, 033115.	1.0	10
49	Controllable soliton interaction in three mode nonlinear optical fiber. <i>Optik</i> , 2018, 175, 39-48.	1.4	10
50	Attosecond soliton switching through the interactions of two and three solitons in an inhomogeneous fiber. <i>Chaos, Solitons and Fractals</i> , 2021, 152, 111390.	2.5	10
51	Novel nested anti-resonant fiber based magnetic fluids sensor: Performance and bending effects inspection. <i>Journal of Magnetism and Magnetic Materials</i> , 2021, 538, 168230.	1.0	10
52	Tailored dispersion profile in controlling optical solitons in a tapered parabolic index fiber. <i>Journal of Modern Optics</i> , 2016, 63, 468-476.	0.6	9
53	Optical solitons and their shaping in a monomode optical fiber with some inhomogeneous dispersion profiles. <i>Optik</i> , 2019, 192, 162906.	1.4	8
54	Tunable differential modal gain in FM-EDFA system using dual pumping scheme at 100 Gbps system capacity. <i>Photonic Network Communications</i> , 2017, 34, 451-460.	1.4	7

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55	Attosecond soliton shaping through dispersion tailoring technique in a monomode optical fiber. Optik, 2018, 167, 196-203.	1.4	7
56	Preventable interaction of attosecond soliton in an inhomogeneous lossy fiber: Application to dispersion and nonlinearity management. Optik, 2018, 158, 753-761.	1.4	7
57	Analytical and numerical demonstration of phase characteristics on two solitons under the influence of third-order dispersion. Optical and Quantum Electronics, 2019, 51, 1.	1.5	6
58	Numerical investigation of dual guided elliptical ring core few-mode fiber for space division multiplexing applications. Optik, 2021, 228, 166111.	1.4	6
59	Controllable Phase shift of optical soliton through nonlinear tunneling in a dual mode optical fiber. Optik, 2021, 242, 167094.	1.4	6
60	Combined effects of frequency and higher-order effects on soliton conversion in an erbium fiber with inhomogeneous broadening. Nonlinear Dynamics, 2018, 91, 687-696.	2.7	5
61	Multi-soliton propagation in generalized inhomogeneous NLS equation with symmetric potentials. Optik, 2019, 181, 948-955.	1.4	5
62	Transverse magnetic mode slab waveguide optical sensor in the presence of conducting interfaces. Optik, 2019, 178, 1090-1096.	1.4	5
63	Panda resonator structure to generate four-wave mixing by nonlinear effect. Optik, 2019, 180, 900-905.	1.4	5
64	A terahertz Brewster switch based on superconductor hyperbolic metamaterial. Journal of Applied Physics, 2020, 128, .	1.1	5
65	Exploring the optical properties of exposed-core-based photonic-crystal fibers. Journal of Computational Electronics, 2021, 20, 1260-1269.	1.3	5
66	Manipulating high birefringence in elliptical core meta fiber by varying metal/dielectric concentration of the framed AMM. Optical and Quantum Electronics, 2017, 49, 1.	1.5	4
67	Oscillating soliton propagation in SPNLS equation with symmetric potentials. Optik, 2020, 221, 165143.	1.4	4
68	Soliton propagation in negative-index materials with self-steepening effect. European Physical Journal D, 2014, 68, 1.	0.6	3
69	Exploring next generation of IOT devices compatible few mode assisting ring core elliptical cladding optical fiber. Wireless Networks, 2020, 26, 3217-3225.	2.0	3
70	Boomerons in a three-coupled NLS system with inhomogeneous dispersion and nonlinearity. Waves in Random and Complex Media, 0, , 1-15.	1.6	3
71	Periodic and nonperiodic amplifications of attosecond solitons in an inhomogeneous lossy optical fiber. Optik, 2022, 252, 168498.	1.4	3
72	Modulational instability in a tapered erbium doped fiber with inhomogeneous broadening. Optical and Quantum Electronics, 2022, 54, 1.	1.5	3

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73	Design of germanium core with anisotropic metamaterial cladding optical fiber in mid-infrared range applications. Optical and Quantum Electronics, 2020, 52, 1.	1.5	2
74	System investigations of few-mode erbium-doped fiber amplifier (FM-EDFA) for vortex mode amplifications. Journal of Computational Electronics, 2021, 20, 1549-1559.	1.3	2
75	Photonic crystal fibers for various sensing applications. , 2022, , 3-21.		2
76	Design of temperature sensor using liquid filled photonic crystal fiber. , 2016, , .		1
77	Combined influence of third order dispersion (TOD) and intra-pulse Raman scattering (IRS) on initially phase imparted solitons. Optik, 2018, 164, 45-53.	1.4	1
78	Refractometric sensor based on slab waveguides of simultaneously negative permittivity and permeability materials. Optical and Quantum Electronics, 2020, 52, 1.	1.5	0
79	Ultra-short pulse for plasma induced THz generation using carbon nano tubes. Optical and Quantum Electronics, 2021, 53, 1.	1.5	0
80	Design of Elliptical Ring Core Fiber with support of four LP modes in SDM applications. , 2017, , .		0