

# Maria L Calvo

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

116  
papers

1,404  
citations

18  
h-index

35  
g-index

163  
ext. papers

1,658  
ext. citations

2.3  
avg, IF

4.23  
L-index

#	Paper	IF	Citations
116	Neutron Optics: New Algorithm Based on Green's Functions for Simulating Waveguides with Dirichlet Boundary Conditions. <i>Applied Mathematical Modelling</i> , <b>2021</b> , 101, 694-694	4.5	0
115	Neutron waveguides in neutron optics: Green's functions formalism with Dirichlet boundary conditions. <i>Journal of Modern Optics</i> , <b>2020</b> , 67, 899-913	1.1	1
114	Focalizing slow neutron beams at and below micron scales and discussion on BNCT (II). <i>Phosphorus, Sulfur and Silicon and the Related Elements</i> , <b>2019</b> , 194, 956-966	1	1
113	Neutron Optics: Fundamentals <b>2019</b> , 3-78		2
112	Neutron Confinement and Waveguiding <b>2019</b> , 123-160		1
111	Focalizing slow neutron beams at and below micron scales: Discussion on BNCT. <i>Phosphorus, Sulfur and Silicon and the Related Elements</i> , <b>2018</b> , 193, 64-73	1	3
110	Temperature dependence mitigation in stationary Fourier-transform on-chip spectrometers. <i>Optics Letters</i> , <b>2017</b> , 42, 2239-2242	3	24
109	Overlapping single photons on coherent states with two independent laser sources: a proposal. <i>Journal of Modern Optics</i> , <b>2016</b> , 63, 1932-1942	1.1	
108	Spatial Heterodyne Fourier-Transform Waveguide Spectrometers. <i>Progress in Optics</i> , <b>2014</b> , 59, 159-208	3.4	3
107	Femtosecond laser induced damage characterization of transmission volume phase gratings. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 041905	3.4	2
106	Subwavelength grating Fourier-transform interferometer array in silicon-on-insulator. <i>Laser and Photonics Reviews</i> , <b>2013</b> , 7, L67-L70	8.3	24
105	High-resolution Fourier-transform spectrometer chip with microphotonic silicon spiral waveguides. <i>Optics Letters</i> , <b>2013</b> , 38, 706-8	3	75
104	Optical fiber interferometer array for scanless Fourier-transform spectroscopy. <i>Optics Letters</i> , <b>2013</b> , 38, 2262-4	3	8
103	Neutron Fibres: Confined Propagation and Focusing of Neutrons in the Micron Range and Residual Stress Analysis. <i>Materials Science Forum</i> , <b>2013</b> , 772, 51-56	0.4	
102	Photopolymerizable organically modified holographic glass with enhanced thickness for spectral filters. <i>Journal of Applied Physics</i> , <b>2013</b> , 113, 033101	2.5	4
101	Bandpass filter implemented with blazed waveguide sidewall gratings in silicon-on-insulator. <i>Electronics Letters</i> , <b>2012</b> , 48, 715	1.1	2
100	Demonstration of a curved sidewall grating demultiplexer on silicon. <i>Optics Express</i> , <b>2012</b> , 20, 19882-92	3.3	18

99	Ultracompact polarization converter with a dual subwavelength trench built in a silicon-on-insulator waveguide. <i>Optics Letters</i> , <b>2012</b> , 37, 365-7	3	75
98	Femtosecond spectral pulse shaping with holographic gratings recorded in photopolymerizable glasses. <i>Optics Express</i> , <b>2011</b> , 19, 1516-27	3.3	9
97	Microparticle movements in optical funnels and pods. <i>Optics Express</i> , <b>2011</b> , 19, 5232-43	3.3	17
96	Characterization of holographically generated beams via phase retrieval based on Wigner distribution projections. <i>Optics Express</i> , <b>2011</b> , 19, 6064-77	3.3	22
95	Wavefield imaging via iterative retrieval based on phase modulation diversity. <i>Optics Express</i> , <b>2011</b> , 19, 18621-35	3.3	12
94	Holographic Fabry-Perot spectrometer. <i>Optics Letters</i> , <b>2011</b> , 36, 564-6	3	1
93	Phase-space tomography with a programmable Radon-Wigner display. <i>Optics Letters</i> , <b>2011</b> , 36, 2441-3	3	7
92	Optical systems and algorithms for phase-space tomography of one- and two-dimensional beams <b>2011</b> ,		2
91	Phase-Space Tomography of Optical Beams <b>2011</b> , 789-808		1
90	Photopolymerizable glasses incorporating high refractive index species and ionic liquid: A comparative study. <i>Journal of Applied Physics</i> , <b>2011</b> , 109, 053106	2.5	5
89	Generation of femtosecond paraxial beams with arbitrary spatial distribution. <i>Optics Letters</i> , <b>2010</b> , 35, 652-4	3	17
88	Structure of the dielectric tensor in nematic liquid crystals with topological charge. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>2010</b> , 27, 1466-72	1.8	5
87	Dynamic programming revisited: a generalized formalism for arbitrary ray trajectories in inhomogeneous optical media with radial dependence. <i>Journal of Optics</i> , <b>2009</b> , 11, 125403		
86	Photopolymerizable glass with high refractive index species: Optical performance and emerging implementations. <i>Optical Memory and Neural Networks (Information Optics)</i> , <b>2009</b> , 18, 21-24	0.7	1
85	Polarization and phase-shift properties of high spatial frequency holographic gratings in a photopolymerizable glass. <i>Optics Letters</i> , <b>2009</b> , 34, 485-7	3	4
84	Phase space tomography reconstruction of the Wigner distribution for optical beams separable in Cartesian coordinates. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>2009</b> , 26, 1301-6	1.8	15
83	Programmable two-dimensional optical fractional Fourier processor. <i>Optics Express</i> , <b>2009</b> , 17, 4976-83	3.3	45
82	Photopolymerizable sol-gel nanocomposites for holographic recording. <i>Journal of Optics</i> , <b>2009</b> , 11, 024009		9

81	Experimental Reconstruction of Wigner Distribution <b>2009</b> ,		1
80	Experimental creation of chainlike beams and investigation of their structure. <i>Optics and Spectroscopy (English Translation of Optika I Spektroskopiya)</i> , <b>2008</b> , 104, 756-759	0.7	1
79	Applications of gyrator transform for image processing. <i>Optics Communications</i> , <b>2007</b> , 278, 279-284	2	113
78	A novel wavelength dispersive device with a dispersive element based on staircase-like straight and parallel arrayed waveguides. <i>Optics Communications</i> , <b>2007</b> , 270, 31-40	2	2
77	Sol-gel holographic recording materials. <i>Optics and Spectroscopy (English Translation of Optika I Spektroskopiya)</i> , <b>2007</b> , 103, 855-857	0.7	1
76	Introduction to Gyrator Transform. <i>AIP Conference Proceedings</i> , <b>2007</b> ,	0	1
75	Experimental implementation of the gyrator transform. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>2007</b> , 24, 3135-9	1.8	120
74	Gyrator transform: properties and applications. <i>Optics Express</i> , <b>2007</b> , 15, 2190-203	3.3	170
73	Fresnel diffraction effects in Fourier-transform arrayed waveguide grating spectrometer. <i>Optics Express</i> , <b>2007</b> , 15, 16431-41	3.3	3
72	Diffusion study in tailored gratings recorded in photopolymer glass with high refractive index species. <i>Applied Physics Letters</i> , <b>2007</b> , 91, 141115	3.4	24
71	A Volume Holographic Sol-Gel Material with Large Enhancement of Dynamic Range by Incorporation of High Refractive Index Species. <i>Advanced Materials</i> , <b>2006</b> , 18, 2014-2017	24	61
70	Experimental detection of the optical Pendellüung effect. <i>Physical Review Letters</i> , <b>2006</b> , 97, 084801	7.4	25
69	Optical system design for orthosymplectic transformations in phase space. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>2006</b> , 23, 2494-500	1.8	44
68	Fourier series analysis of fractal lenses: theory and experiments with a liquid-crystal display. <i>Applied Optics</i> , <b>2006</b> , 45, 1187-92	1.7	10
67	Arrayed waveguide grating based on group-index modification. <i>Journal of Lightwave Technology</i> , <b>2006</b> , 24, 1551-1557	4	6
66	Diffraction by Cantor fractal zone plates. <i>Journal of Modern Optics</i> , <b>2005</b> , 52, 2771-2783	1.1	7
65	Fractional Transforms in Optical Information Processing. <i>Eurasip Journal on Advances in Signal Processing</i> , <b>2005</b> , 2005, 1	1.9	28
64	Neutron fibres and possible applications to NCT. <i>Applied Radiation and Isotopes</i> , <b>2004</b> , 61, 841-4	1.7	8

63	Focusing properties of fractal zone plates: experimental implementation with a liquid-crystal display. <i>Optics Letters</i> , <b>2004</b> , 29, 1321-3	3	25
62	A wavelength demultiplexer based on waveguide broadening in silicon-on-insulator platform <b>2004</b> ,		3
61	Analysis of a novel stress-sensing technique based on light scattering by an array of birefringent optical waveguides. <i>Journal of Optics</i> , <b>2003</b> , 5, S370-S373		1
60	Paraxial diffraction on structures generated by multiplicative iterative procedures. <i>Journal of Optics</i> , <b>2003</b> , 5, S324-S328		3
59	Stress sensor based on light scattering by an array of birefringent optical waveguides <b>2003</b> , 4829, 917		
58	Early use of corrective lenses in Spanish colonies of the Americas including parts of the future United States: reference to Viceroy Luis de Velasco (the Son). <i>Optometry and Vision Science</i> , <b>2003</b> , 80, 681-9	2.1	1
57	Image reconstruction from amplitude-only and phase-only data in the fractional Fourier domain. <i>Optics and Spectroscopy (English Translation of Optika I Spektroskopiya)</i> , <b>2003</b> , 95, 110-113	0.7	3
56	Fresnel diffraction by deterministic fractal gratings: An experimental study. <i>Optics and Spectroscopy (English Translation of Optika I Spektroskopiya)</i> , <b>2003</b> , 95, 131-133	0.7	10
55	Light scattering by an array of birefringent optical waveguides: theoretical foundations. <i>Journal of the Optical Society of America B: Optical Physics</i> , <b>2003</b> , 20, 1542	1.7	6
54	Power filtering of nth order in the fractional Fourier domain. <i>Journal of Physics A</i> , <b>2002</b> , 35, 7779-7785		3
53	Perception of High-Contrast Blurred Edges. <i>Journal of Visual Communication and Image Representation</i> , <b>2001</b> , 12, 240-254	2.7	2
52	A photopolymerizable glass with diffraction efficiency near 100% for holographic storage. <i>Applied Physics Letters</i> , <b>2001</b> , 78, 1490-1492	3.4	105
51	Neutron fibres: a three-dimensional analysis of bending losses. <i>Journal Physics D: Applied Physics</i> , <b>2000</b> , 33, 1666-1673	3	5
50	Fractionalization of the linear cyclic transforms. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>2000</b> , 17, 2330-8	1.8	9
49	Spatial pulse characterization in periodically segmented waveguides by using dynamic programming approach. <i>Optics Communications</i> , <b>1999</b> , 169, 223-231	2	3
48	Multiple scattering of classical electromagnetic waves by volume gratings: Completion of Fujiwara's solution. <i>Journal of Modern Optics</i> , <b>1999</b> , 46, 181-198	1.1	1
47	Edge image quality assessment: a new formulation for degraded edge imaging. <i>Image and Vision Computing</i> , <b>1998</b> , 16, 1003-1017	3.7	5
46	Digitally generated soft edges with predetermined luminance: an analysis of their influence on image degradation <b>1998</b> , 3346, 72		

45	Line spread function formulation proposed by W. H. Steel: a revision. <i>Applied Optics</i> , <b>1997</b> , 36, 4362-6	1.7	6
44	Light propagation in optical waveguides: a dynamic programming approach. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>1997</b> , 14, 872	1.8	6
43	A Formalism for Analyzing Degraded Edges Using Modified Heaviside Functions. <i>Documenta Ophthalmologica Proceedings Series</i> , <b>1997</b> , 77-81		2
42	Wave-front conversion between a Gaussian beam with a cylindrical phase and a plane wave for on-axis off-Bragg incidence. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>1996</b> , 13, 131	1.8	7
41	Transmission holocoupler with a gaussian wave front: Applications to a beam corrector. <i>Journal of Modern Optics</i> , <b>1996</b> , 43, 1261-1279	1.1	1
40	Resolution Criteria and Modulation Transfer Function (MTF) / Line Spread Function(LSF) Relationship in Diffraction Limited Systems. <i>Journal of Optics (India)</i> , <b>1996</b> , 25, 1-21	1.3	2
39	Approximate methods to determine the modulation transfer function of a hololens system: a comparative study. <i>Optical Engineering</i> , <b>1995</b> , 34, 1116	1.1	
38	Incoherent spatial impulse response in variable-cross-section photoreceptors and frequency-domain analysis. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>1995</b> , 12, 2339-47	1.8	3
37	Holographic coupler for GRIN lenses: Analysis of coupling conditions and phase profile of the coupled signal. <i>Fiber and Integrated Optics</i> , <b>1993</b> , 12, 301-317	0.8	1
36	Wave-front conversion between a Gaussian beam with a cylindrical phase function and a plane wave in a monomode on-axis transmission holographic coupler. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>1993</b> , 10, 2573	1.8	7
35	Single-image and double-image holographic coupler/optical fiber: a comparative study. <i>Applied Optics</i> , <b>1993</b> , 32, 3969-77	1.7	
34	Light diffraction by compound optical systems in the Fresnel region: boundary value problems and quantum representation. <i>Journal of Optics</i> , <b>1992</b> , 1, 307-320		
33	High efficiency off-axis holographic coupler. <i>Optics Communications</i> , <b>1992</b> , 88, 22-26	2	4
32	Theoretical approach to hyperacuity tests based on resolution criteria for two-line images <b>1991</b> ,		1
31	General transfer function of a compound optical system under linearity conditions in the Fresnel regime. <i>Optical Engineering</i> , <b>1991</b> , 30, 1503	1.1	1
30	Phase profile determination for a holocoupler/GRIN medium system <b>1990</b> , 1281, 222		
29	Point spread function and modulation transfer function of a photolens treated as a cascade linear system under the Fresnel regime: application to a Tessar lens. <i>Optical Engineering</i> , <b>1990</b> , 29, 263	1.1	3
28	An analysis of the modal field in absorbing optical waveguides and some useful approximations. <i>Journal Physics D: Applied Physics</i> , <b>1989</b> , 22, 603-610	3	1

27	Holographic coupler-optical fiber system: mathematical model for the coupling optimization. <i>Applied Optics</i> , <b>1989</b> , 28, 2031-8	1.7	6
26	Holographic Coupler / Grin Medium : Characterization Of The Coupling Optimization <b>1989</b> , 1136, 140		
25	Holographic gratings in the transition regime. <i>Optics and Laser Technology</i> , <b>1988</b> , 20, 156-160	4.2	
24	Coherent Transfer Function Of A Hololens/Parabolic Optical Fiber System. <i>Optical Engineering</i> , <b>1987</b> , 26, 266499	1.1	
23	Three-dimensional analysis of bending losses in dielectric optical waveguides with arbitrary refractive-index profile. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>1987</b> , 4, 683	1.8	7
22	Initial field and energy flux in absorbing optical waveguides. I. Theoretical formalism. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>1987</b> , 4, 1037-42	1.8	6
21	Initial field and energy flux in absorbing optical waveguides. II. Implications. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>1987</b> , 4, 2133-40	1.8	9
20	Effects induced on the transverse-spatial-impulse response of an inhomogeneous photoreceptor with a nonsymmetric refractive index profile and arbitrarily located origin. <i>Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics</i> , <b>1987</b> , 9, 261-273		1
19	Holocoupler-Selfoc Fiber System: A Coherent Transfer Matrix Description <b>1986</b> , 0600, 94		
18	A coupled wave analysis for on-axis holographic lenses in generalized coordinates. <i>Optics Communications</i> , <b>1986</b> , 59, 331-334	2	1
17	Linear behaviour in the aperture pupil of single photoreceptors: consequences related to the degree of inhomogeneity. <i>Biological Cybernetics</i> , <b>1986</b> , 54, 201-10	2.8	4
16	Coupled wave analysis for a reflection dephased mixed hologram grating. <i>Optical and Quantum Electronics</i> , <b>1986</b> , 18, 213-217	2.4	3
15	Neutron fibres. II. Some improving alternatives and analysis of bending losses. <i>Journal Physics D: Applied Physics</i> , <b>1986</b> , 19, 957-973	3	9
14	Neutron fibres: a possible application of neutron optics. <i>Journal Physics D: Applied Physics</i> , <b>1984</b> , 17, 475-502		16
13	Optical image processing to determine the optical properties of cellular membranes. <i>Applied Optics</i> , <b>1984</b> , 23, 324	1.7	1
12	Single-mode Anisotropic Cylindrical Dielectric Waveguides. <i>Optica Acta</i> , <b>1983</b> , 30, 481-503		4
11	Coupling Of Dielectric Waveguides <b>1983</b> , 0369, 401		1
10	Corrections to Raman-Nath Diffraction by Volume Holograms. <i>Optica Acta</i> , <b>1982</b> , 29, 1061-1072		8

9	Inhomogeneous Slab and Cylindrical Dielectric Waveguides with Discontinuous Permittivities: Propagation Modes. <i>Optica Acta</i> , <b>1982</b> , 29, 667-684		3
8	Inhomogeneous Dielectric Slabs with Analytic Frequency-dependent Permittivities. <i>Optica Acta</i> , <b>1981</b> , 28, 1253-1271		6
7	Eikonal Approximation For Electromagnetic Wave Scattering By A Cladded Optical Fiber <b>1980</b> ,		4
6	Electromagnetic scattering by an infinite inhomogeneous dielectric cylinder: New Green's function and integral equations. <i>Journal of Mathematical Physics</i> , <b>1980</b> , 21, 389-394	1.2	1
5	Scattering of TM Waves by Dielectric Fibres Iterative and Eikonal Solutions. <i>Optica Acta</i> , <b>1980</b> , 27, 1367-1378		28
4	Fedholm's method for multiple scattering of electromagnetic waves by fixed obstacles. <i>Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods</i> , <b>1978</b> , 45, 68-76		2
3	Diffraction of a classical electromagnetic wave by a thin periodic slab: a rigorous approach. <i>Journal of Physics A</i> , <b>1978</b> , 11, 1855-1864		4
2	On the rigorous approximation methods for electromagnetic-wave scattering by fixed obstacles. <i>Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods</i> , <b>1975</b> , 29, 277-284		5
1	Neutron Optics, Neutron Waveguides, and Applications		2