

# Walter D Furlan

## List of Publications by Year in descending order

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92  
papers

1,611  
citations

361413

20  
h-index

345221

36  
g-index

93  
all docs

93  
docs citations

93  
times ranked

773  
citing authors

#	ARTICLE	IF	CITATIONS
1	Fractal zone plates. Optics Letters, 2003, 28, 971.	3.3	179
2	3D printed diffractive terahertz lenses. Optics Letters, 2016, 41, 1748.	3.3	114
3	Fractal photon sieve. Optics Express, 2006, 14, 11958.	3.4	92
4	White-light imaging with fractal zone plates. Optics Letters, 2007, 32, 2109.	3.3	83
5	Devil's vortex-lenses. Optics Express, 2009, 17, 21891.	3.4	69
6	Fractal zone plates with variable lacunarity. Optics Express, 2004, 12, 4227.	3.4	64
7	Visual Acuity in Simple Myopic Astigmatism: Influence of Cylinder Axis. Optometry and Vision Science, 2006, 83, 311-315.	1.2	59
8	Bifractal focusing and imaging properties of Thue's Morse Zone Plates. Optics Express, 2015, 23, 19846.	3.4	58
9	Devil's lenses. Optics Express, 2007, 15, 13858.	3.4	53
10	Cantor-like fractal photonic crystal waveguides. Optics Communications, 2005, 252, 46-51.	2.1	52
11	Designing a new test for contrast sensitivity function measurement with iPad. Journal of Optometry, 2015, 8, 101-108.	1.3	47
12	Twin axial vortices generated by Fibonacci lenses. Optics Express, 2013, 21, 10234.	3.4	41
13	Diffractive m-bonacci lenses. Optics Express, 2017, 25, 8267.	3.4	34
14	Multifractal zone plates. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2010, 27, 1851.	1.5	31
15	Corneal and Refractive Astigmatism in Adults: A Power Vectors Analysis. Optometry and Vision Science, 2009, 86, 1182-1186.	1.2	26
16	Multiplexing of encrypted data using fractal masks. Optics Letters, 2012, 37, 2895.	3.3	23
17	White-light Fourier transformer with low chromatic aberration. Applied Optics, 1992, 31, 4682.	2.1	22
18	Fractal conical lenses. Optics Express, 2006, 14, 9077.	3.4	22

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19	Optical-data storage-readout technique based on fractal encrypting masks. Optics Letters, 2009, 34, 316.	3.3	22
20	Radonâ€™Wigner display: a compact optical implementation with a single varifocal lens. Applied Optics, 1997, 36, 8363.	2.1	21
21	Fractal axicons. Optics Communications, 2006, 263, 1-5.	2.1	21
22	Influence of different types of astigmatism on visual acuity. Journal of Optometry, 2017, 10, 141-148.	1.3	21
23	Variable fractional Fourier processor: a simple implementation. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1997, 14, 853.	1.5	20
24	Fractal square zone plates. Optics Communications, 2013, 286, 42-45.	2.1	20
25	Multiple-plane image formation by Walsh zone plates. Optics Express, 2018, 26, 21210.	3.4	20
26	Generation of programmable 3D optical vortex structures through devilâ€™s vortex-lens arrays. Applied Optics, 2013, 52, 5822.	1.8	19
27	Statistical analysis when dealing with astigmatism: assessment of different spherocylindrical notations. Ophthalmic Epidemiology, 2001, 8, 27-37.	1.7	17
28	Volumetric multiple optical traps produced by Devil's lenses. Journal of the European Optical Society-Rapid Publications, 0, 5, .	1.9	15
29	Cantor dust zone plates. Optics Express, 2013, 21, 2701.	3.4	15
30	Imaging quality of multifocal intraocular lenses: automated assessment setup. Ophthalmic and Physiological Optics, 2013, 33, 420-426.	2.0	15
31	Multiplexing THz Vortex Beams With a Single Diffractive 3-D Printed Lens. IEEE Transactions on Terahertz Science and Technology, 2019, 9, 63-66.	3.1	15
32	Phase-space representations as a tool for the evaluation of the polychromatic OTF. Optics Communications, 1993, 96, 208-213.	2.1	14
33	Fractal-structured multifocal intraocular lens. PLoS ONE, 2018, 13, e0200197.	2.5	14
34	Optical propagation of fractal fields. Experimental analysis in a single display. Journal of Modern Optics, 2001, 48, 1247-1253.	1.3	13
35	Polyadic devil's lenses. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2009, 26, 2532.	1.5	13
36	Diffractive corneal inlay for presbyopia. Journal of Biophotonics, 2017, 10, 1110-1114.	2.3	13

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37	Visual acuity and contrast sensitivity screening with a new iPad application. <i>Displays</i> , 2016, 44, 15-20.	3.7	12
38	Analysis of the irradiance along different paths in the image space using the Wigner distribution function. <i>Optics Communications</i> , 1997, 139, 11-16.	2.1	11
39	Stereopsis assessment at multiple distances with an iPad application. <i>Displays</i> , 2017, 50, 35-40.	3.7	11
40	Off-axis Analysis of the Strehl Ratio Using the Wigner Distribution Function. <i>Journal of Modern Optics</i> , 1991, 38, 1685-1689.	1.3	10
41	Undergraduate experiment with fractal diffraction gratings. <i>European Journal of Physics</i> , 2011, 32, 687-694.	0.6	10
42	In Vitro Chromatic Performance of Three Presbyopia-Correcting Intraocular Lenses with Different Optical Designs. <i>Journal of Clinical Medicine</i> , 2022, 11, 1212.	2.4	10
43	Polychromatic axial behavior of aberrated optical systems: Wigner distribution function approach. <i>Applied Optics</i> , 1997, 36, 9146.	2.1	9
44	White-light optical implementation of the fractional Fourier transform with adjustable order control. <i>Applied Optics</i> , 2000, 39, 238.	2.1	9
45	A new trifocal corneal inlay for presbyopia. <i>Scientific Reports</i> , 2021, 11, 6620.	3.3	9
46	Opto-digital tomographic reconstruction of the Wigner distribution function of complex fields. <i>Applied Optics</i> , 2008, 47, E63.	2.1	8
47	Inter-Display Reproducibility of Contrast Sensitivity Measurement with iPad. <i>Optometry and Vision Science</i> , 2016, 93, 1532-1536.	1.2	8
48	Terahertz Sieves. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2018, 8, 140-143.	3.1	8
49	Diffraction by m- fibonacci gratings. <i>European Journal of Physics</i> , 2015, 36, 065005.	0.6	7
50	On-axis irradiance for spherically aberrated optical systems with obscured rectangular apertures: A study using the Wigner distribution function. <i>Journal of Modern Optics</i> , 1998, 45, 69-77.	1.3	6
51	Subjective Refraction Techniques in the Frame of the Three-Dimensional Dioptric Space. <i>Optometry and Vision Science</i> , 2001, 78, 106-112.	1.2	6
52	The Effect of Fractal Contact Lenses on Peripheral Refraction in Myopic Model Eyes. <i>Current Eye Research</i> , 2014, 39, 1151-1160.	1.5	6
53	Fractal Light Vortices. , 0, , .		6
54	Relative Peripheral Myopia Induced by Fractal Contact Lenses. <i>Current Eye Research</i> , 2018, 43, 1514-1521.	1.5	6

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55	Optical Evaluation of New Designs of Multifocal Diffractive Corneal Inlays. Journal of Ophthalmology, 2019, 2019, 1-6.	1.3	6
56	The stenopaec slit: an analytical expression to quantify its optical effects in front of an astigmatic eye. Ophthalmic and Physiological Optics, 2001, 21, 327-333.	2.0	5
57	Through-focus response of multifocal intraocular lenses evaluated with a spatial light modulator. Applied Optics, 2012, 51, 8594.	1.8	5
58	Assessment of a New Trifocal Diffractive Corneal Inlay for Presbyopia Correction Using an Adaptive Optics Visual Simulator. Photonics, 2022, 9, 135.	2.0	5
59	Hybrid opticalâ€“digital method for local-displacement analysis by use of a phase-space representation. Applied Optics, 1995, 34, 4713.	2.1	4
60	Synthesis of filters for specified axial irradiance by use of phaseâ€“space tomography. Optics Communications, 2001, 189, 15-19.	2.1	4
61	Optical aberrations measurement with a low cost optometric instrument. American Journal of Physics, 2002, 70, 857-861.	0.7	4
62	Comparison of two different devices to assess intraocular lenses. Optik, 2016, 127, 10108-10114.	2.9	4
63	Optical propagation of fractal fields. Experimental analysis in a single display. Journal of Modern Optics, 2001, 48, 1247-1253.	1.3	4
64	Proposal of a new diffractive corneal inlay to improve near vision in a presbyopic eye. Applied Optics, 2020, 59, D54.	1.8	4
65	Performance analysis of optical imaging systems based on the fractional Fourier transform. Journal of Modern Optics, 1998, 45, 1797-1807.	1.3	3
66	Photonic Structures: Fractal Zone Plates Produce Axial Irradiance With Fractal Profile. Optics and Photonics News, 2003, 14, 31.	0.5	3
67	Detection of wave aberrations in the human eye using a retinoscopy-like technique. Optics Communications, 2006, 260, 767-771.	2.1	3
68	Diffraction by fractal metallic supergratings. Optics Express, 2007, 15, 15628.	3.4	3
69	Self-similar focusing with generalized devilâ€™s lenses. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2011, 28, 210.	1.5	3
70	On the power profiles of contact lenses measured with NIMO TR1504. Journal of Optometry, 2017, 10, 265-266.	1.3	3
71	Simultaneous display of all the Fresnel diffraction patterns of one-dimensional apertures. American Journal of Physics, 2001, 69, 799-802.	0.7	2
72	Axial behaviour of Cantor ring diffractals. Journal of Optics, 2003, 5, S361-S364.	1.5	2

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73	Analysis of the imaging method for assessment of the smile of laser diode bars. Applied Optics, 2009, 48, 4880.	2.1	2
74	Focusing properties of diffractive lenses constructed with the aperiodic-bonacci sequence. , 2015, , .		2
75	Wavefront sensing using a graphical user interface. Computer Applications in Engineering Education, 2016, 24, 255-262.	3.4	2
76	Imaging Performance of a Diffractive Corneal Inlay for Presbyopia in a Model Eye. IEEE Access, 2019, 7, 163933-163938.	4.2	2
77	<title>Polychromatic merit functions in terms of the Wigner distribution function</title>. , 1996, , .		1
78	Performance analysis of optical imaging systems based on the fractional fourier transform. Journal of Modern Optics, 1998, 45, 1797-1807.	1.3	1
79	Parallel fractional correlation: an optical implementation. Applied Optics, 2001, 40, 6439.	2.1	1
80	Assessment of a Wigner-distribution-function-based method to compute the polychromatic axial response given by an aberrated optical system. Optical Engineering, 2003, 42, 753.	1.0	1
81	&lt;p&gt;Effect of cylinder power and axis changes on vision in astigmatic participants: a comment [Letter]&lt;/p&gt;. Clinical Optometry, 2019, Volume 11, 63-64.	1.2	1
82	Ophthalmic: Laboratorio virtual para el diseÃ±o de nuevas lentes oftÃ¡lmicas. Modelling in Science Education and Learning, 0, 6, 173.	0.2	1
83	Variable fractional Fourier processor: a simple implementation: erratum. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1997, 14, 3432.	1.5	0
84	<title>Wigner distribution function applied to the calculation of the axial irradiance impulse response</title>. , 1999, , .		0
85	<title>Axial irradiance computation using the Wigner distribution function: assessment of the method</title>. , 2001, , .		0
86	Axial behavior of Cantor rings diffractals. , 2003, , .		0
87	Focusing properties of aperiodic zone plates. , 2006, , .		0
88	Devilâ€™s vortex-lens arrays generating 3D optical vortex structures. Proceedings of SPIE, 2013, , .	0.8	0
89	A computer-assisted experiment to study the influence of the point spread function in the image formation process. European Journal of Physics, 2018, 39, 065301.	0.6	0
90	Diffractive Corneal Inlays: A New Concept for Correction of Presbyopia. , 0, , .		0

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91	8. Basic ophthalmic instruments. , 2016, , 103-120.		0
92	Unconventional imaging with radial Walsh filters. , 2018, , .		0