

# Miguel A Muriel

## List of Publications by Year in descending order

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137  
papers

2,651  
citations

236925  
25  
h-index

197818  
49  
g-index

138  
all docs

138  
docs citations

138  
times ranked

1300  
citing authors

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 1  | An efficient inverse scattering algorithm for the design of nonuniform fiber Bragg gratings. IEEE Journal of Quantum Electronics, 1999, 35, 1105-1115.                               | 1.9 | 290       |
| 2  | Real-time Fourier transformer based on fiber gratings. Optics Letters, 1999, 24, 1.  | 3.3 | 257       |
| 3  | Temporal self-imaging effects: theory and application for multiplying pulse repetition rates. IEEE Journal of Selected Topics in Quantum Electronics, 2001, 7, 728-744.              | 2.9 | 249       |
| 4  | Real-time optical spectrum analysis based on the time-space duality in chirped fiber gratings. IEEE Journal of Quantum Electronics, 2000, 36, 517-526.                               | 1.9 | 206       |
| 5  | Technique for multiplying the repetition rates of periodic trains of pulses by means of a temporal self-imaging effect in chirped fiber gratings. Optics Letters, 1999, 24, 1672.    | 3.3 | 141       |
| 6  | Real-time spectrum analysis in microstrip technology. IEEE Transactions on Microwave Theory and Techniques, 2003, 51, 705-717.   | 4.6 | 90        |
| 7  | Internal field distributions in fiber Bragg gratings. IEEE Photonics Technology Letters, 1997, 9, 955-957.   | 2.5 | 83        |
| 8  | A new transfer matrix formalism for the analysis of fiber ring resonators: compound coupled structures for FDMA demultiplexing. Journal of Lightwave Technology, 1990, 8, 1904-1919. | 4.6 | 71        |
| 9  | Temporal Talbot effect in fiber gratings and its applications. Applied Optics, 1999, 38, 6700.   | 2.1 | 69        |
| 10 | Transmission bistability in a double-coupler fiber ring resonator. Optics Letters, 1991, 16, 907.  | 3.3 | 58        |
| 11 | Experimental demonstration of real-time Fourier transformation using linearly chirped fibre Bragg gratings. Electronics Letters, 1999, 35, 2223.                                     | 1.0 | 53        |
| 12 | Apodized coupled resonator waveguides. Optics Express, 2007, 15, 10196.  | 3.4 | 51        |
| 13 | Phase reconstruction from reflectivity in fiber Bragg gratings. Journal of Lightwave Technology, 1997, 15, 1314-1322.  | 4.6 | 48        |
| 14 | Chirped delay lines in microstrip technology. IEEE Microwave and Wireless Components Letters, 2001, 11, 486-488.   | 3.2 | 45        |
| 15 | Fiber Bragg grating as an optical filter tuned by a magnetic field. Optics Letters, 1997, 22, 603.   | 3.3 | 44        |
| 16 | Single and double amplified recirculating delay lines as fibre-optic filters. Electronics Letters, 1992, 28, 1017-1019.  | 1.0 | 40        |
| 17 | Design of an ultrafast all-optical differentiator based on a fiber Bragg grating in transmission. Optics Letters, 2008, 33, 2458.  | 3.3 | 40        |
| 18 | Amplified fiber-optic recirculating delay lines. Journal of Lightwave Technology, 1994, 12, 294-305.   | 4.6 | 38        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 19 | Spectral self-imaging effect by time-domain multilevel phase modulation of a periodic pulse train. Optics Letters, 2011, 36, 858.   | 3.3 | 38        |
| 20 | Fiber grating filter for WDM systems: an improved design. IEEE Photonics Technology Letters, 1999, 11, 694-696.   | 2.5 | 36        |
| 21 | Fiber grating synthesis by use of time-frequency representations. Optics Letters, 1998, 23, 1526.   | 3.3 | 35        |
| 22 | Phase reconstruction from reflectivity in uniform fiber Bragg gratings. Optics Letters, 1997, 22, 93.   | 3.3 | 33        |
| 23 | Optical bistability and differential amplification in nonlinear fiber resonators. IEEE Journal of Quantum Electronics, 1994, 30, 2578-2588.   | 1.9 | 30        |
| 24 | Field distributions inside fiber gratings. IEEE Journal of Quantum Electronics, 1999, 35, 548-558.  | 1.9 | 30        |
| 25 | Integrable high order UWB pulse photonic generator based on cross phase modulation in a SOA-MZI. Optics Express, 2013, 21, 22911.   | 3.4 | 29        |
| 26 | Fiber Bragg grating period reconstruction using time-frequency signal analysis and application to distributed sensing. Journal of Lightwave Technology, 2001, 19, 646-654.  | 4.6 | 28        |
| 27 | Ultrafast all-optical integrator based on a fiber Bragg grating: proposal and design. Optics Letters, 2008, 33, 1348.   | 3.3 | 23        |
| 28 | Pulse distortion in optical fibers and waveguides with arbitrary chromatic dispersion. Journal of the Optical Society of America B: Optical Physics, 2003, 20, 2523.  | 2.1 | 22        |
| 29 | Microwave V-I transmission matrix formalism for the analysis of photonic circuits: application to fiber Bragg gratings. Journal of Lightwave Technology, 2003, 21, 3125-3134.                                       | 4.6 | 21        |
| 30 | Periodic Time-Domain Modulation for the Electrically Tunable Control of Optical Pulse Train Envelope and Repetition Rate Multiplication. IEEE Journal of Selected Topics in Quantum Electronics, 2012, 18, 377-383. | 2.9 | 18        |
| 31 | Temporal self-imaging effect for periodically modulated trains of pulses. Optics Express, 2014, 22, 15251.  | 3.4 | 18        |
| 32 | All-pass optical structures for repetition rate multiplication. Optics Express, 2008, 16, 11162.  | 3.4 | 16        |
| 33 | Flat-top pulse generation based on a fiber Bragg grating in transmission. Optics Letters, 2009, 34, 752.  | 3.3 | 15        |
| 34 | Grating Design of Oppositely Chirped FBGs for Pulse Shaping. IEEE Photonics Technology Letters, 2007, 19, 435-437.  | 2.5 | 14        |
| 35 | Temporal self-imaging effect for chirped laser pulse sequences: Repetition rate and duty cycle tunability. Optics Communications, 2005, 253, 156-163.   | 2.1 | 13        |
| 36 | Ultrafast all-optical Nth-order differentiator based on chirped fiber Bragg gratings. Optics Express, 2007, 15, 7196.   | 3.4 | 13        |

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|----|---|-----|-----------|
| 37 | Spectral behavior of a low-cost all-fiber component based on untapered multifiber unions. IEEE Photonics Technology Letters, 1989, 1, 184-187.  | 2.5 | 12        |
| 38 | Simultaneous ultrafast optical pulse train bursts generation and shaping based on Fourier series developments using superimposed fiber Bragg gratings. Optics Express, 2007, 15, 10878.                   | 3.4 | 12        |
| 39 | Repetition-rate multiplication using a single all-pass optical cavity. Optics Letters, 2008, 33, 962.   | 3.3 | 12        |
| 40 | Reduction of polarization related effects in superimposed fiber Bragg gratings. Applied Optics, 2009, 48, 1635.   | 2.1 | 12        |
| 41 | Bistability. Applied Physics B, Photophysics and Laser Chemistry, 1982, 28, 131-141.  | 1.5 | 11        |
| 42 | Analysis of double-parallel amplified recirculating optical-delay lines. Applied Optics, 1994, 33, 1015.  | 2.1 | 11        |
| 43 | Optical pulse sequence transmission through single-mode fibers: interference signal analysis. Journal of Lightwave Technology, 1991, 9, 27-36.  | 4.6 | 10        |
| 44 | New code division multiple access encoder-decoder. Optical Engineering, 1993, 32, 481.  | 1.0 | 10        |
| 45 | Growth Modeling of Fiber Gratings: A Numerical Investigation. Fiber and Integrated Optics, 2002, 21, 451-463.   | 2.5 | 10        |
| 46 | Study of optical pulses - Fiber gratings interaction by means of joint time-frequency signal representations. Journal of Lightwave Technology, 2003, 21, 2931-2941.                                       | 4.6 | 10        |
| 47 | Optical differential amplification in nonlinear fibre ring resonator. Electronics Letters, 1991, 27, 1810.  | 1.0 | 9         |
| 48 | Double-cavity fiber structures as all optical timing extraction circuits for gigabit networks. Fiber and Integrated Optics, 1993, 12, 247-255.  | 2.5 | 9         |
| 49 | Reconstruction of fiber grating period profiles by use of Wigner-Ville distributions and spectrograms. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2000, 17, 2496. | 1.5 | 9         |
| 50 | Reconstructing arbitrary strain distributions within fiber gratings by time-frequency signal analysis. Optics Letters, 2000, 25, 698.   | 3.3 | 9         |
| 51 | Phase-reconstruction in photonic crystals from S-parameter magnitude in microstrip technology. Optical and Quantum Electronics, 2007, 39, 321-331.  | 3.3 | 9         |
| 52 | UWB Pulses Generation and Modulation Through a Customized FBG-Based Photonic Device. IEEE Photonics Technology Letters, 2016, 28, 2319-2322.  | 2.5 | 9         |
| 53 | Design of two-mode interference wavelength filter utilising symmetric three-mode structure. Electronics Letters, 1988, 24, 1525.  | 1.0 | 8         |
| 54 | Measurement of transmitted power in untapered multifibre unions: oscillatory spectral behaviour. Electronics Letters, 1989, 25, 843.  | 1.0 | 7         |

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|----|---|-----|-----------|
| 55 | Real-time Fourier transformations performed simultaneously over multiwavelength signals. IEEE Photonics Technology Letters, 2001, 13, 55-57.  | 2.5 | 7         |
| 56 | Scalable UWB photonic generator based on the combination of doublet pulses. Optics Express, 2014, 22, 15346.  | 3.4 | 7         |
| 57 | Design and application of double amplified recirculating ring structure for hybrid fibre buses. Optical and Quantum Electronics, 1995, 27, 847-857.   | 3.3 | 6         |
| 58 | Polarization effects in short- and long-period fibre gratings: a generalized approach. Journal of Optics, 2004, 6, S45-S51.   | 1.5 | 6         |
| 59 | On the Measurement of Fiber Bragg Grating's Phase Responses and the Applicability of Phase Reconstruction Methods. IEEE Transactions on Instrumentation and Measurement, 2011, 60, 1416-1422. | 4.7 | 6         |
| 60 | A novel electrically tunable dispersion compensation system. IEEE Journal of Selected Topics in Quantum Electronics, 1999, 5, 1332-1338.  | 2.9 | 5         |
| 61 | Emulated single-mode fiber-optic link by use of a linearly chirped fiber Bragg grating. IEEE Journal of Selected Topics in Quantum Electronics, 1999, 5, 1345-1352.                           | 2.9 | 5         |
| 62 | Simultaneous multiwavelength real-time optical spectrum analysis. Applied Optics, 2001, 40, 3831.   | 2.1 | 5         |
| 63 | Synthesis of 1D Bragg gratings by a layer-aggregation method. Optics Letters, 2007, 32, 2312.   | 3.3 | 5         |
| 64 | UWB Monocycle Generator Based on the Non-Linear Effects of an SOA-Integrated Structure. IEEE Photonics Technology Letters, 2014, 26, 690-693.   | 2.5 | 5         |
| 65 | Integrated 16-ps Pulse Generator Based on a Reflective SOA-EAM for UWB Schemes. IEEE Photonics Technology Letters, 2016, 28, 2180-2182.   | 2.5 | 5         |
| 66 | Liquid-crystal electro-optic modulator based on electrohydrodynamic effects. Optics Letters, 1980, 5, 494.  | 3.3 | 4         |
| 67 | Electrooptical behavior of twisted-wedge nematic structures. Applied Optics, 1984, 23, 2159.  | 2.1 | 4         |
| 68 | Depressed-index waveguides (DIW's) in integrated optics. Journal of Lightwave Technology, 1990, 8, 1779-1791.   | 4.6 | 4         |
| 69 | Measurement technique for characterisation of 2 $\times$ 2 couplers. Electronics Letters, 1992, 28, 1303.   | 1.0 | 4         |
| 70 | Acoustic Quasi-Crystals. Europhysics Letters, 1993, 21, 915-920.  | 2.0 | 4         |
| 71 | Low threshold optical differential amplification using a fibre amplifier in a nonlinear ring resonator. Electronics Letters, 1993, 29, 1249.  | 1.0 | 4         |
| 72 | Performance parameters and applications of a modified amplified recirculating delay line. Fiber and Integrated Optics, 1995, 14, 347-358.   | 2.5 | 4         |

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|----|--|-----|-----------|
| 73 | Model of an openable Faraday-effect hybrid-current optical transducer based on a square-shaped structure with internal mirror. Applied Optics, 1997, 36, 6242.   | 2.1 | 4         |
| 74 | WDM channel selector based on transmissive chirped moiré fibre grating. Electronics Letters, 1999, 35, 386.  | 1.0 | 4         |
| 75 | Hermite-Gauss series expansions applied to arrayed waveguide gratings. IEEE Photonics Technology Letters, 2005, 17, 2331-2333.   | 2.5 | 4         |
| 76 | Ultrafast all-optical Nth-order differentiator and simultaneous repetition-rate multiplier of periodic pulse train. Optics Express, 2007, 15, 12102.   | 3.4 | 4         |
| 77 | WDM compatible and electrically tunable SPE-OCDMA system based on the temporal self-imaging effect. Optics Letters, 2011, 36, 400.   | 3.3 | 4         |
| 78 | UWB Doublet Generation Employing Cross-Phase Modulation in a Semiconductor Optical Amplifier Mach-Zehnder Interferometer. IEEE Photonics Journal, 2013, 5, 7101106-7101106.                                    | 2.0 | 4         |
| 79 | Third-Order Dispersion in Linearly Chirped Bragg Gratings and Its Compensation. Fiber and Integrated Optics, 2000, 19, 367-382.  | 2.5 | 3         |
| 80 | Technique for simultaneously multiplying the repetition rate of multiwavelength optical pulse trains. IEEE Photonics Technology Letters, 2001, 13, 1358-1360.  | 2.5 | 3         |
| 81 | Highly Accurate Synthesis of Fiber and Waveguide Bragg Gratings by an Impedance Reconstruction Layer-Aggregation Method. IEEE Journal of Quantum Electronics, 2007, 43, 889-898.                               | 1.9 | 3         |
| 82 | Optical pulse sequence transmission through monomode fibres under second-and third-order dispersion. Electronics Letters, 1988, 24, 1252.  | 1.0 | 3         |
| 83 | Electrohydrodynamic Behavior in Twisted-Wedge Nematic Structures. Molecular Crystals and Liquid Crystals, 1983, 98, 183-191.   | 0.8 | 2         |
| 84 | <title>Laser Pulse Shaping With Liquid Crystals</title>. , 1983, , .   |     | 2         |
| 85 | Investigation on spectral behaviour of novel direct coupling compound fibre ring resonator. Electronics Letters, 1990, 26, 772.  | 1.0 | 2         |
| 86 | Computer simulation of an all-optical coherent code division multiple-access network. Fiber and Integrated Optics, 1992, 11, 1-24.   | 2.5 | 2         |
| 87 | Acoustic-field fibre-optic sensor. Sensors and Actuators A: Physical, 1993, 37-38, 489-493.  | 4.1 | 2         |
| 88 | Experimental Demonstration of the Temperature Influence on an Optical Universal Compensator for Polarization Changes Induced by Birefringence on a Retracing Beam. Optical Fiber Technology, 1997, 3, 347-355. | 2.7 | 2         |
| 89 | Real-Time Spectrum Analysis in Microstrip Technology. , 2001, , .  |     | 2         |
| 90 | Analysis of superimposed fiber Bragg gratings using the microwave V-I transmission matrix formalism. IEEE Photonics Technology Letters, 2005, 17, 2343-2345.   | 2.5 | 2         |

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|-----|---|-----|-----------|
| 91  | Real-time optical spectrum analyzers operating with spectrally incoherent broadband continuous-wave light source. Optics Communications, 2007, 273, 320-323.                                  | 2.1 | 2         |
| 92  | Repetition Rate Multiplication Using All-Pass Optical Structures. Optics and Photonics News, 2008, 19, 37.  | 0.5 | 2         |
| 93  | Proposed flat-topped pulses bursts generation using all-pass multi-cavity structures. Optics Express, 2009, 17, 13875.  | 3.4 | 2         |
| 94  | Bandlimited Airy Pulses for Invariant Propagation in Single-Mode Fibers. Journal of Lightwave Technology, 2012, 30, 3660-3666.  | 4.6 | 2         |
| 95  | Experimental Electrically Reconfigurable Time-Domain Spectral Amplitude Encoding/Decoding in an Optical Code Division Multiple Access System. Fiber and Integrated Optics, 2013, 32, 324-335. | 2.5 | 2         |
| 96  | Scalable High-Order UWB Pulse Generation Employing an FBG-Based Photonic Superstructure. IEEE Photonics Technology Letters, 2015, 27, 2146-2149.  | 2.5 | 2         |
| 97  | Optically Induced Modulation of a Laser Beam in Nematic Liquid Crystals Structures. Molecular Crystals and Liquid Crystals, 1983, 99, 1-9.  | 0.8 | 1         |
| 98  | Light Level To Electrical Frequency Conversion With Hybrid Optical Bistable Devices. , 1985, 0492, 397.   |     | 1         |
| 99  | Electro-optically tunable wavelength demultiplexer using depressed index waveguides. Electronics Letters, 1991, 27, 195.  | 1.0 | 1         |
| 100 | New behavior in nonideal couplers. Applied Optics, 1992, 31, 4332.  | 2.1 | 1         |
| 101 | Signal processing techniques applied to fiber grating synthesis. , 1999, , BA1.   |     | 1         |
| 102 | Real-Time Fourier Transformer System Using Transmissive Fiber Gratings. Fiber and Integrated Optics, 2000, 19, 439-453.   | 2.5 | 1         |
| 103 | Microstrip Chirped Delay Lines based on Photonic Band-Gap Structures. , 2002, , .   |     | 1         |
| 104 | Phase Reconstruction for the Frequency Response Measurement of FBGs. , 2007, , .  |     | 1         |
| 105 | Spectrally Efficient Phase Encoded Optical CDMA System in Time Domain. , 2008, , .  |     | 1         |
| 106 | Experimental demonstration of a FBG-based temporal optical pulse shaping scheme dual to spatial arrangements for its use in OCDMA systems. , 2009, , .  |     | 1         |
| 107 | Spectrally efficient optical CDMA system based on chromatic dispersion for phase coding of individual spectral lines in the time domain. Proceedings of SPIE, 2009, , .                       | 0.8 | 1         |
| 108 | High order UWB pulses generation based on a scalable phase-to-intensity technique. , 2015, , .  |     | 1         |

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|-----|--|-----|-----------|
| 109 | Dual-channel real-time Fourier transformer based on chirped Moiré fiber grating. , 1999, , .   |     | 1         |
| 110 | Total switching of unpolarized light with an electrooptic liquid-crystal device. IEEE Journal of Quantum Electronics, 1981, 17, 2424-2426.                                       | 1.9 | 0         |
| 111 | <title>Digital Light Beam Deflector With Liquid Crystals</title>. , 1981, , .  |     | 0         |
| 112 | Photonic logic based on molecular reorientation of nematic liquid crystals. Philosophical Transactions of the Royal Society A, 1984, 313, 381-384.                               | 1.1 | 0         |
| 113 | Analysis of the interference signal arising from the transmission of a pulse sequence through a monomode fibre. Electronics Letters, 1990, 26, 149.                              | 1.0 | 0         |
| 114 | An acoustic quasi-crystalline wave-field. Chaos, Solitons and Fractals, 1993, 3, 265-268.  | 5.1 | 0         |
| 115 | Design of a lossy tunable wavelength demultiplexer utilizing MgO:Ti:LiNbO <sub>3</sub> /sub 3/ depressed index waveguides. Journal of Lightwave Technology, 1993, 11, 2080-2086. | 4.6 | 0         |
| 116 | Optical Amplified Recirculating Delay Lines Transient Response Effect on Hybrid Fiber Buses. Optical Fiber Technology, 1997, 3, 65-71.   | 2.7 | 0         |
| 117 | A microwave balanced mixer using an automatically biased dual-drive intensity electro-optic modulator. Microwave and Optical Technology Letters, 1998, 18, 58-63.                | 1.4 | 0         |
| 118 | Time-frequency representation applied to fiber gratings synthesis. , 0, , .  |     | 0         |
| 119 | Sidelobes suppression in fiber gratings: a new design. , 1998, 3491, 124.  |     | 0         |
| 120 | Chirped fiber grating-based fiber optic communication evaluator: design and implementation. Optical Engineering, 1999, 38, 1640.   | 1.0 | 0         |
| 121 | Reconstruction of Fiber Gratings by Use Of Time-Frequency Signal Analysis: Application to Distributed Sensing. Optics and Photonics News, 2000, 11, 41.                          | 0.5 | 0         |
| 122 | Synchronized Multiplication Of Repetition Rates in Multiwavelength Optical Pulse Trains. Optics and Photonics News, 2001, 12, 47.  | 0.5 | 0         |
| 123 | Phase- Retrieval From Magnitude-Data In Microstrip Electromagnetic Crystals. , 2006, , .   |     | 0         |
| 124 | Experimental demonstration of the reduction of PDL and DGD in Fibre Bragg Gratings by using a twisted-fibre for the inscription. , 2008, , .                                     |     | 0         |
| 125 | Optical pulse train repetition rate and envelope control based on the optical fourier transform. , 2009, , .   |     | 0         |
| 126 | Experimental Demonstration of a FBG-Based Temporal Optical Pulse Shaping Scheme Dual to Spatial Arrangements for its Use in OCDMA Systems. , 2009, , .                           |     | 0         |



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|-----|--|-----|-----------|
| 127 | Optical Code Division Multiple Access coder/decoder pairs based on temporal optical pulse shaping with fiber Bragg Gratings and electrooptic modulators. , 2010, , . |     | 0         |
| 128 | Optical signal processing with electrooptic modulators and dispersion. , 2011, , .   |     | 0         |
| 129 | Electrically Tunable Delay for Trains of Optical Pulses. , 2012, , .   |     | 0         |
| 130 | Generation of an UWB monocycle employing cross-phase modulation in a SOA-MZ interferometer. , 2013, , .  |     | 0         |
| 131 | UWB doublet generation in an integrated semiconductor optical amplifier Mach-Zehnder interferometer. , 2013, , .   |     | 0         |
| 132 | Characterization of Microring Filters for Differential Group Delay Applications. Journal of Lightwave Technology, 2017, 35, 2943-2947.                               | 4.6 | 0         |
| 133 | Programmable Retiming of an Optical Clock Signal Using the Temporal Talbot Effect. IEEE Photonics Technology Letters, 2019, 31, 2007-2010.                           | 2.5 | 0         |
| 134 | Spectrally Efficient Optical CDMA System Based on Chromatic Dispersion for Phase Coding of Individual Spectral Lines in the Time Domain. , 2009, , .                 |     | 0         |
| 135 | Electrically Tunable Delay for Trains of Optical Pulses. , 2012, , .   |     | 0         |
| 136 | Synthesis of Arbitrary Group Delay Responses with All-Pass Optical Cavities Structures. , 2012, , .  |     | 0         |
| 137 | Electrically tunable delay line for trains of optical pulses based on the temporal self-imaging effect. Optica Pura Y Aplicada, 2012, 45, 113-119.                   | 0.1 | 0         |