

**PUBLICACIONES DERIVADAS DE LAS TESIS DEFENDIDAS EN EL PROGRAMA DE  
DOCTORADO EN “SISTEMAS ELECTRÓNICOS AVANZADOS. SISTEMAS  
INTELIGENTES” EN EL AÑO 2021**

Doctorando	Berián Múgica, Jesús
Fecha depósito	02/12/2020
<p><b>Artículos en revistas internacionales:</b></p> <p>Jesús Berián, Ignacio Bravo, Alfredo Gardel, José Luis Lázaro y Mercedes Riga. Title: Dynamic Insulin Basal Needs Estimation and Parameters Adjustment in Type 1 Diabetes. Sensors (Molecular Diversity Preservation International (MDPI)), vol.2, no. 15, Agosto 2021 doi: <a href="https://doi.org/10.3390/s21155226">https://doi.org/10.3390/s21155226</a> Calidad: JCR, Impact Factor: 3.576; Position 14/64 (Q1) en Instruments &amp; Instrumentation</p> <p>Jesús Berián, Ignacio Bravo, Alfredo Gardel, José Luis Lázaro, Sergio Hernández Title: A Wearable Closed-Loop Insulin Delivery System Based on Low-Power SoCs. Electronics (MPDI), vol.8, no. 612, Mayo 2019, doi: 10.3390/electronics8060612 Calidad: JCR, Impact Factor: 2.412; Position 125/266 (Q2) en Engineering: Electrical &amp; Electronic</p>	

Doctorando	Teixeira Magalhaes, Regina Manuela
Fecha lectura	05/03/2021
<p><b>Artículos en revistas internacionales:</b></p> <p><b>R. Magalhães</b>, A. Garcia-Ruiz, H. F. Martins, J. Pereira, W. Margulis, S. Martin-Lopez, and M. Gonzalez-Herraez. “Fiber-based distributed bolometry”. Optics Express ISSN: 1094-4087 Año de publicación: 2019 Volumen: 27 Número: 4 Páginas: 4317-4328 doi:10.1364/OE.27.004317 Calidad: JCR Impact Factor: 3.669 Área: OPTICS Cuartil: Q1 Posición en el área: 19/97</p> <p>A. Garcia-Ruiz, H. F. Martins, <b>R. Magalhães</b>, J. Pereira, O. Tarasenko, L. Norin, W. Margulis, S. Martin-Lopez, and M. Gonzalez-Herraez. “Hermetic Carbon Coatings for Electro-Thermal All-Fiber Phase Modulators” Journal of Lightwave Technology ISSN: 1558-2213 Año de publicación: 2019 Volumen: 37 Número: 18 Páginas: 4567-4572; doi:10.1109/JLT.2019.2911426 Calidad: JCR Impact Factor: 4.288 OPTICS Cuartil: Q1 Posición en el área: 14/97</p>	

Williams, E.F. Fernández-Ruiz, **M.R., Magalhaes, R.**, Vanthillo, R. Zhan, Z. González-Herráez, M. Martins, H.F. “Distributed sensing of microseisms and teleseisms with submarine dark fibers” Nature Communications ISSN: 2041-1723. Año de publicación: 2019 Volumen: 10 Número: 1; doi: 10.1038/S41467-019-13262-7.

JCR Impact Factor: 673676 Área: MULTIDISCIPLINARY SCIENCES Cuartil: Q1 Posición en el área: 6/71

Costa, L. **Magalhães, R.** Palmieri, L. Martins, H. Martin-Lopez, S. Fernández-Ruiz, M.R. Gonzalez-Herraez, M. “Fast and direct measurement of the linear birefringence profile in standard single-mode optical fibers”, Optics Letters ISSN: 1539-4794 Año de publicación: 2020 Volumen: 45 Número: 3 Páginas: 623-626 DOI:10.1364/OL.382559.

Calidad: JCR Impact Factor: 83<; Área: OPTICS Cuartil: Q1 Posición en el área: 22/99

**Magalhães, R.** Costa, L. Martin-Lopez, S. Gonzalez-Herraez, M. Braña, A.F. Martins, H.F.

Title: Long-range distributed solar irradiance sensing using optical fibers. Sensors ISSN: 1424-8220 Año de publicación: 2020 Volumen: 20 Número: 3 DOI: 10.3390/S20030908

Calidad: JCR Impact Factor: 83<; Área: INSTRUMENTS & INSTRUMENTATION Cuartil: Q1 Posición en el área: 14/64

**Magalhães, R.** Pereira, J. Tarasenko, O. Martin-Lopez, S. González-Herráez, M. Margulis, W. Martins, H.F. “Towards distributed measurements of electric fields using optical fibers: Proposal and proof-of-concept experiment”. Sensors. ISSN: 1424-8220. Año de publicación: 2020 Volumen: 20 Número: 16 Páginas: 1-13 DOI:10.3390/S20164461.

JCR Impact Factor: 83<; Área: INSTRUMENTS & INSTRUMENTATION Cuartil: Q1 Posición: 14/64.

#### **Congresos internacionales:**

1. **Magalhaes, R.** Fernandez-Ruiz, M.R. Costa, L. Martins, H.F. Garcia-Ruiz, A. Martin-Lopez, S. Williams, E. Zhan, Z. Vantillo, R. Gonzalez-Herraez, M. “Underwater seismology using submarine dark fibres” 22nd International Conference on Transparent Optical Networks (ICTON) 2020 DOI: 10.1109/ICTON51198.2020.9203132 (invited presentation)
2. **Magalhães, R.** Costa, L. Martin-Lopez, S. Gonzalez-Herraez, M. Braña, A.F. Martins, H.F. “Real Time Distributed Solar Irradiance sensing: a step closer to smart photovoltaic grids” 27th International Conference on Optical Fiber Sensors SCOPUS:2-s2.0-85136782690 (invited presentation)
3. Costa, L. **Magalhães, R.** Palmieri, L. Martins, H. Martin-Lopez, S. Fernández-Ruiz, M.R. Gonzalez-Herraez, M. “Fast and direct measurement of longitudinal birefringence distribution in conventional single-mode optical fibers” 27th International Conference on Optical Fiber, 2020, SCOPUS:2-s2.0-85136826348

4. **Magalhães, R.** Neves, T. Costa, L. Scherino, L. Petagna, P. Thevenaz, L. Martin-Lopez, S. Gonzalez-Herraez, M. Martins, H.F. "Reaching mK-scale stability in CP- $\phi$ OTDR over daily measurements" 27th International Conference on Optical Fiber Sensors, 2020, SCOPUS: 2-s2.0-85136792711
5. Neves, T. **Magalhães, R.** Scherino, L. Martin-Lopez, S. Martins, H.F. Petagna, P. Thévenaz, L. "Humidity Effect on Acrylate- and Polyimide-Coated Fibres for Distributed Sensing Applications", 27th International Conference on Optical Fiber Sensors, 2020, SCOPUS:2-s2.0-85136785205
6. Fernández-Ruiz, M.R. Williams, E.L. **Magalhaes, R.** Vanthillo, R. Costa, L. Zhan, Z. Martin-Lopez, S. Gonzalez-Herraez, M. Martins, H.F, "Teleseisms monitoring using chirped-pulse  $\phi$ OTDR "12th International Photonics and Opto Electronics Meeting TDR Actas: Proceedings of SPIE - The International Society for Optical Engineering Editorial: SPIE ISSN: 1996-756X ISBN: 9781510631236 Año de publicación: 2019 Volumen: 11199 DOI:10.1117/12.2539966
7. **Magalhães, R.** Pereira, J. Garcia-Ruiz, A. Margulis, W. Martin-Lopez, S. Gonzalez-Herraez, M. Martins, H.F. "Distributed detection of quadratic Kerr effect in silica fibers using chirped-pulse  $\phi$ OTDR" Proceedings of SPIE - The International Society for Optical Engineering Editorial: SPIE ISSN: 1996-756X ISBN: 9781510631236 Año de publicación: 2019 Volumen: 11199 DOI: 10.1117/12.2540755
8. **Magalhães, R.** Garcia-Ruiz, A. Martin-Lopez, S. Gonzalez-Herraez, M. Martins, H.F, "Spectrally-resolved distributed optical fibre bolometry" Proceedings of SPIE - The International Society for Optical Engineering Editorial: SPIE ISSN: 1996-756X ISBN: 9781510631236 Año de publicación: 2019 Volumen: 11199 DOI: 10.1117/12.2541345
9. **Magalhães, R.** Garcia-Ruiz, A. Martins, H.F. Pereira, J. Margulis, W. Martin-Lopez, S. González-Herráez, M "Distributed detection of optical radiation using chirped-pulse phase-sensitive optical time domain reflectometry" 26th International Conference on Optical Fiber Sensors OSA - The Optical Society ISBN: 9781943580507 Año de publicación: 2018 Volumen: Part F124-OFS 2018 DOI: 10.1364/OFS.2018.THE13
10. Garcia-Ruiz, A. Martins, H.F. **Magalhães, R.** Pereira, J.M.B. Tarasenko, O. Norin, L. Margulis, W. Martin-Lopez, S. Gonzalez-Herraez, M. "Hermetic all-fiber phase modulators using joule heating in carbon-coated fibers" 26th International Conference on Optical Fiber Sensors OSA - The Optical Society ISBN: 9781943580507 Año de publicación: 2018 Volumen: Part F124-OFS 2018 DOI: 10.1364/OFS.2018.WD4
11. Garcia-Ruiz, A. **Magalhaes, R.** Costa, L. Cobo, F.J. Martins, H.F. Fernandez-Ruiz, M.R. Martin-Lopez, S. Gonzalez-Herraez, M. "Transforming the Fiber-Optic Network into a Dense and Ultrasensitive Seismic Sensor Array" International Conference on Transparent Optical Networks Editorial: IEEE Computer Society ISSN: 2162-7339 ISBN: 9781538666043 Año de publicación: 2018 Volumen: 2018-July DOI:10.1109/ICTON.2018.8473770

Doctorando	Pereira da Costa, Luis Duarte
Fecha lectura	15/10/2020
<p><b>Artículos en revistas internacionales</b></p> <ol style="list-style-type: none"> <li>1. Maria Rosario Fernandez-Ruiz, Hugo F Martins, <b>Luis Costa</b>, Sonia Martin-Lopez, Miguel Gonzalez-Herraez “Steady-Sensitivity Distributed Acoustic Sensors” IEEE Journal of Lightwave Technology 36, 5690-5696 (2018)</li> <li>2. Hari Datta Bhatta, <b>Luis Costa</b>, Andres Garcia-Ruiz, Maria R Fernandez-Ruiz, Hugo F Martins, Moshe Tur, Miguel Gonzalez-Herraez “Dynamic measurements of 1000 microstrains using chirped-pulse phase-sensitive optical time-domain reflectometry” IEEE Journal of Lightwave Technology 37 4888-4895 (2019)</li> <li>3. Leonardo Marcon, Miguel Soriano-Amat, Riccardo Veronese, Andres Garcia-Ruiz, Marco Calabrese, <b>Luis Costa</b>, Maria R Fernandez-Ruiz, Hugo F Martins, Luca Palmieri, Miguel Gonzalez-Herraez “Analysis of Disturbance-Induced “Virtual” Perturbations in Chirped Pulse-OTDR” IEEE Photonics Technology Letters 32, 158-161 (2019)</li> <li>4. Li Zhang, <b>Luis Costa</b>, Zhisheng Yang, Marcelo A Soto, Miguel Gonzalez-Herráez, Luc Thévenaz “Analysis and reduction of large errors in Rayleigh-based distributed sensor” IEEE Journal of Lightwave Technology 37, 4710-4719 (2019)</li> <li>5. <b>Luis Costa</b>, Hugo F Martins, Sonia Martin-Lopez, Maria Rosario Fernandez-Ruiz, Miguel Gonzalez-Herraez “Fully Distributed Optical Fiber Strain Sensor With 10–12 <math>\epsilon</math>/VHz Sensitivity” IEEE Journal of Lightwave Technology 37, 4487-4495(2019)</li> <li>6. Andrés Garcia-Ruiz, Adriana Morana, <b>L Costa</b>, Hugo F Martins, Sonia Martin-Lopez, Miguel González-Herráez, Aziz Boukenter, Youcef Ouerdane, Sylvain Girard “Distributed detection of hydrogen and deuterium diffusion into a single-mode optical fiber with chirped-pulse phase-sensitive optical time-domain reflectometry” Optics Letters 44, 5186-5289 (2019)</li> <li>7. María R. Fernández-Ruiz, <b>Luis Costa</b>, Hugo F. Martins “Distributed acoustic sensing using chirped-pulse phase-sensitive OTDR technology” Sensors (Basel) 20 4368 (2019)</li> <li>8. Leonardo Marcon, Marcelo A Soto, Miguel Soriano-Amat, <b>Luis Costa</b>, Maria R Fernandez-Ruiz, Hugo F Martins, Luca Palmieri, Miguel Gonzalez-Herraez, “High-resolution chirped-pulse <math>\phi</math>-OTDR by means of sub-bands processing” IEEE Journal of Lightwave Technology 38, 4142-4149 (2020)</li> <li>9. <b>Luis Costa</b>, Regina Magalhães, Luca Palmieri, Hugo Martins, Sonia Martin-Lopez, María R Fernández-Ruiz, Miguel Gonzalez-Herraez “Fast and direct measurement of the linear birefringence profile in standard single-mode optical fibers” Optics Letters 45, 623-626 (2020)</li> <li>10. Regina Magalhães, <b>Luis Costa</b>, Sonia Martin-Lopez, Miguel Gonzalez-Herraez, Alejandro F Braña, Hugo F Martins “Long-range distributed solar irradiance sensing using optical fibers” Sensors (Basel) 20, 908 (2020)</li> </ol>	

### **Congresos internacionales**

1. Andres Garcia-Ruiz, Regina Magalhães, **Luis Costa**, Francisco J Cobo, Hugo F Martins, María R Fernández-Ruiz, Sonia Martin-Lopez, Miguel Gonzalez-Herraez “Transforming the Fiber-Optic Network into a Dense and Ultrasensitive Seismic Sensor Array” in 2018 20th International Conference on Transparent Optical Networks (ICTON)
2. Hari Datta Bhatta, **Luis Costa**, Andres Garcia-Ruiz, Maria R Fernandez-Ruiz, Hugo F Martins, Moshe Tur, Miguel Gonzalez-Herraez “Extending the measurement of true dynamic strain via chirped-pulse phase-sensitive optical time domain reflectometry to 100’s of microstrains” in Optical Fiber Sensors Conference (OFS2018), paper WF14.
3. **Luis Costa**, Hugo F Martins, Sonia Martin-Lopez, María R Fernández-Ruiz, Miguel Gonzalez-Herraez “Reaching  $\text{p}\epsilon/\text{V}$  Hz sensitivity in a distributed optical fiber strain sensor” in Optical Fiber Sensors Conference (OFS2018), paper TuD3. (Best Student Paper Award)
4. Hugo F Martins, María R Fernández-Ruiz, **Luis Costa**, Ethan Williams, Zhongwen Zhan, Sonia Martin-Lopez, Miguel Gonzalez-Herraez “Monitoring of remote seismic events in metropolitan area fibers using distributed acoustic sensing (DAS) and spatiotemporal signal processing” in Optical Fiber Communication Conference (OFC 2019), paper M2J.1
5. **Luis Costa**, Hugo F Martins, Sonia Martin-Lopez, Maria R Fernández-Ruiz, Miguel Gonzalez-Herraez “Optimization of first-order phase noise cancellation in CP- $\phi$ OTDR” in Proceedings of the Seventh European Workshop on Optical Fibre Sensors, pp 363-366 (2019)
6. Miguel Soriano-Amat, Leonardo Marcon, **Luis Costa**, Andres Garcia-Ruiz, Hugo F Martins, Sonia Martin-Lopez, Luca Palmieri, Miguel Gonzalez-Herraez “Characterization and modelling of induced virtual perturbations in chirped pulse  $\phi$ -OTDR” in Proceedings of the Seventh European Workshop on Optical Fibre Sensors, pp 351-354 (2019)
7. **Luis Costa**, Regina Magalhães, Luca Palmieri, Hugo Martins, Sonia Martin-Lopez, María R Fernández-Ruiz, Miguel Gonzalez-Herraez “Fast and direct measurement of longitudinal birefringence distribution in conventional single-mode optical fibers” in Optical Fiber Sensors Conference (OFS 2020), paper T1.3
8. Regina Magalhães, **Luis Costa**, Sonia Martin-Lopez, Miguel Gonzalez-Herraez, Alejandro F Braña, Hugo F Martins “Real Time Distributed Solar Irradiance sensing: a step closer to smart photovoltaic grids” in Optical Fiber Sensors Conference (OFS 2020), paper Th3B.1
9. Regina Magalhães, Tiago Neves, **Luis Costa**, Lorenzo Scherino, Paolo Petagna, Luc Thevenaz, Sonia Martin-Lopez, Miguel Gonzalez-Herraez, Hugo F Martins “Reaching mK-scale stability in CP- $\phi$ OTDR over daily measurements” in Optical Fiber Sensors Conference (OFS 2020), paper T3.63
10. **Luis Costa**, Luca Schenato, Hugo F Martins, Luca Palmieri, Sonia Martin-Lopez, Maria R Fernández-Ruiz, Miguel González-Herráez “Pressure transducing plane cable structure for fully distributed sound measurements” in Optical Fiber Sensors Conference (OFS 2020), paper W2A.2

Doctorando	Mannay , Khaoula
Fecha lectura	15/12/2020
<p><b>Artículos en revistas internacionales:</b></p> <p>Khaoula Mannay, Jesus Ureña, Álvaro Hernández, Mohsen Machhout  Title: Performance of Location and Positioning Systems: a 3D-Ultrasonic System Case  JOURNAL: Advances in Science, Technology and Engineering Systems Journal (ASTESJ). Volume 3, Issue 2, Page No 106-118, 2018.</p> <p>Mannay, Khaoula; Ureña, Jesús; Hernández, Álvaro; Machhout, Mohsen; Aguilí, Taoufik. 2020.  Title: "Characterization of an Ultrasonic Local Positioning System for 3D Measurements."  JOURNAL: Sensors 20, no. 10: 2794, Pp 1-27 <a href="https://doi.org/10.3390/s20102794">https://doi.org/10.3390/s20102794</a>  JCR, Impact Factor: 3.576. Position: 14 de 64 en la categoría "Instruments &amp; Instrumentation".</p> <p>Mannay K, Ureña J, Hernández Á, Villadangos JM, Machhout M, Aguilí T.  Title: Evaluation of Multi-Sensor Fusion Methods for Ultrasonic Indoor Positioning  JOURNAL: Applied Sciences, 2021; 11(15):6805. <a href="https://doi.org/10.3390/app11156805">https://doi.org/10.3390/app11156805</a>.  JCR, Impact Factor: 2.474. Position: 32 de 91 en la categoría "Engineering Multidisciplinary".</p> <p><b>Congresos internacionales:</b></p> <p>Khaoula Mannay, Jesús Ureña, Álvaro Hernández, David Gualda, José M. Villadangos. "Analysis of performance of Ultrasonic Local Positioning Systems for 3D Spaces". Tipo de participación: Póster.  Congreso: 2017 International Conference on Indoor Positioning and Indoor Navigation (IPIN 2017).  Publicación: Proceedings of 2017 International Conference on Indoor Positioning and Indoor Navigation (IPIN 2017), pp. 1-4. (ISBN 978-4-86049-074-4). Sapporo (Japan). September 2017.</p> <p>Khaoula Mannay, Jesús Ureña, Álvaro Hernández, David Gualda, José M. Villadangos. "Testing an Ultrasonic Local Positioning System for 3D Spaces". Tipo de participación: Poster.  Congreso: 2018 International Conference on Indoor Positioning and Indoor Navigation (IPIN 2018).  Publicación: Proceedings of 2018 International Conference on Indoor Positioning and Indoor Navigation (IPIN 2018), pp. 1-4. Lugar celebración: Nantes (France). Fecha: September 2018.</p>	