

c v n CURRÍCULUM VITAE NORMALIZADO



Hugo Fidalgo Martins

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Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

Hugo F. Martins obtained his PhD in Physics under a jointly-awarded PhD program in the University of Porto, Porto, Portugal and the University of Alcalá, Madrid, Spain, in 2014. The topic of the doctoral dissertation was the use of Raman effect to assist distributed and remote fiber sensing.

His research career has been mainly focused on distributed optical fiber sensing, mainly the use of phase-sensitive optical time domain reflectometry for distributed vibration/intrusions and temperature/strain detection along large structures/perimeters. Dr. H.F.M. is currently a Post-Doctoral researcher (Juan de la Cierva Incorporación) at Instituto de Óptica CSIC, Madrid, Spain. Dr. H.F.M. is an author or coauthor of 46/57 papers in international refereed journal/conference contributions, with >1100 citations (scopus), co-director of 1 PhD thesis and 1 end of year thesis (TFG), co-author in 3 patents extended to PCT, and participated in >15 R&D projects (both in research and industry), 3 of which as PI. Dr. H.F.M. has received several important scientific recognitions, including the award of best PhD Thesis in Optics and Photonics of 2014 in Portugal by the “Sociedade Portuguesa de Óptica e Fotónica” (Portuguese Society of Optics and Photonics).

Technology Transfer:

After finishing his PhD Dr. H.F.M. joined FOCUS SL, a Technology-Based Company specialized in fiber optic distributed sensing applications. Initially with a Marie Curie Post-doctoral position and later as technical director of FOCUS, technology transfer has been an important part of his work and its success is particularly demonstrated by the industrialization of CP- ϕ OTDR technology (patent WO2017093588).

Having been involved in the basic research, patent and scientific publications (jointly with UAH and CSIC) of CP- ϕ OTDR technology, this technology was successfully demonstrated and implemented in FOCUS under his direct management. The patent is currently under commercial exploitation by two companies: ARAGON PHOTONICS LABS S.L.; OMNISENS S.A, after FOCUS was successfully sold. Currently working in CSIC, technology transfer continues to be an important topic of Dr. Hugo F. Martins, having managed (as PI) a ~50 000€ industrial project to support the industrialization of this technology, while participating in other industrial projects.

International Networking:

Having performed his studies mainly in Portugal, Dr. H.F.M. is currently employed in Spain, and during his research career has participated in several international scientific conferences. Mostly in the context of a Marie Curie Post-doctoral grant, he has also attended several training courses and scientific meetings in state-of-the-art R&D institutions of different countries in Europe, having the chance of visiting laboratories and networking with international researchers.



Along his career, international research cooperation has also been a priority, having performed several stays in institutions of different countries (Spain/Switzerland/UK/USA) always achieving relevant results. All stays have resulted in at least the publication of scientific articles in the first quartile (Q1), but in two cases also resulting in three patents which have been extended to PCT – EPFL and UAH, and recently culminated in the supervision of a work published in Nature Communications in collaboration with Caltech (California, USA).

General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

Citations (Google Scholar // Scopus):

-Total citations: 1511 Citations // 1167 Citations

-Citations Last 5 years: 1331 Citations (Average of 266.2/year), with 372 Citations on 2019 // 1033 Citations (Average of 206,6/year), with 308 Citations on 2019

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Publications:

-International scientific journals with peer review: 46 Articles, 38 in the first quartile (Q1). First author in 12 articles, and last author in 5 articles, with emphasis on the recent publication on Nature Communications.

-Scientific conferences: >50

Co-Inventor in 3 patents with PCT extension

R&D Projects:

-Competitive research projects: Participated in several projects, including two large (total budget 4.1M€ and ~1.5M€) European projects.

-Non-competitive (Industrial) contracts: Participated in 14, 3 as principal investigator (PI); The competitive research projects that I have participated in, sum up to > 5 500 000 euros (total values of the projects, funding all the members of the consorciums), with > 1 700 000 euros directly managed by the institutions I participated in.

The Industrial contracts that I have participated in as researcher, sum up to >400 000 euros, with currently >50k€/yr in industrial contracts directly managed as principal investigator.

Co-supervisor of 1 PhD Thesis and 1 TFG (Trabajo Fin Grado)

Currently co-supervising (not presented yet): 1 PhD Thesis, and 1 TFM (Trabajo Fin de Máster).

Reviewer for several international scientific journals

Scientific Prizes:

-Co-Author of paper receiving Best Poster award in national conference OPTOEL 2019

-Co-Author of paper receiving Best Student paper award in 26th International Conference on Optical Fiber Sensors, OFS 2018

-PhD awarded "Prémio Tese de Doutoramento 2015" (**best PhD Thesis in Optics and Photonics of 2014/2015 in Portugal**) by "Sociedade Portuguesa de Óptica e Fotónica" (Portuguese Society of Optics and Photonics)

-PhD Thesis awarded "**Premio Extraordinario de Doctorado**" by UAH

-Co-Author of paper receiving Best Student paper award in international conference APOS 2016

-Best poster of the session in EWOFS 2016

-1 Patent awarded "Accésit en el Premio a la Mejor Patente Nacional" (UAH)



Hugo Fidalgo Martins

Surname(s): **Fidalgo Martins**
Name: **Hugo**
ORCID: **0000-0003-3927-8125**
ScopusID: **37124516000**
ResearcherID: **H-1233-2015**
Contact aut. region/reg.: **Community of Madrid**

Current professional situation

Employing entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency

Professional category: Post-Doc Juan de la Cierva Incorporacion

Start date: 01/03/2019

Type of contract: Grant-assisted student (pre or post-doctoral, others) **Dedication regime:** Full time

Primary (UNESCO code): 220905 - Fibra optics

Previous positions and activities

	Employing entity	Professional category	Start date
1	Universidad de Alcalá	Research Personal	15/01/2018
2	Fiber Optics Consulting Services and Technologies SL	Technical Director	01/10/2016
3	Fiber Optics Consulting Services and Technologies SL	Marie Curie Postdoctoral Fellowship	01/10/2014
4	Fundação para a ciência e tecnologia (PT) / INESC PORTO	PhD Student / Researcher	01/01/2012
5	INESC Porto (now INESC-TEC)	Predocctoral Researcher	01/04/2011

1 **Employing entity:** Universidad de Alcalá **Type of entity:** University
Professional category: Research Personal
Start-End date: 15/01/2018 - 28/02/2019 **Duration:** 1 year - 1 month - 15 days
Dedication regime: Full time
Primary (UNESCO code): 220905 - Fibra optics

2 **Employing entity:** Fiber Optics Consulting Services and Technologies SL **Type of entity:** Business
Professional category: Technical Director
Start-End date: 01/10/2016 - 15/01/2018 **Duration:** 1 year - 3 months - 15 days
Type of contract: Permanent employment contract
Dedication regime: Full time



Primary (UNESCO code): 220905 - Fibra optics

- 3** **Employing entity:** Fiber Optics Consulting Services and Technologies SL **Type of entity:** Business
City employing entity: Madrid, Spain
Professional category: Marie Curie Postdoctoral Fellowship
Start-End date: 01/10/2014 - 30/09/2016 **Duration:** 2 years
Dedication regime: Full time
- 4** **Employing entity:** Fundação para a ciência e tecnologia (PT) / INESC PORTO **Type of entity:** Foundation / Non-profit research centre
City employing entity: Porto, Portugal
Professional category: PhD Student / Researcher
Start-End date: 01/01/2012 - 30/09/2014 **Duration:** 2 years - 9 months
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Dedication regime: Full time
- 5** **Employing entity:** INESC Porto (now INESC-TEC) **Type of entity:** Non-profit research institution
City employing entity: Porto, Portugal
Professional category: Predoctoral Researcher
Start-End date: 01/04/2011 - 31/12/2011 **Duration:** 9 months
Type of contract: Grant-assisted student (pre or post-doctoral, others)



Education

University education

1st and 2nd cycle studies and pre-Bologna degrees

1 University degree: Master

Name of qualification: Master's degree in Physics - Specialization in Experimental Physics

City degree awarding entity: Porto, Portugal

Degree awarding entity: Faculty of Sciences of the University of Porto **Type of entity:** University

Date of qualification: 27/07/2011

Foreign qualification: Mestre em Física - Especialização em Física Experimental

2 University degree: Higher degree

Name of qualification: Licenciado degree in Physics

City degree awarding entity: Porto, Portugal

Degree awarding entity: Faculty of Sciences of the University of Porto **Type of entity:** University

Date of qualification: 12/09/2009

Foreign qualification: Licenciado em Física

Doctorates

Doctorate programme: (Cotutela): Doutoramento em Física, MAP-Fis // (D332) Doctorado en Electrónica: Sistemas Electrónicos Avanzados, Sistemas Inteligentes

Degree awarding entity: (Cotutela): Universidade do Porto // Universidad de Alcalá

City degree awarding entity: Porto // Alcalá de Henares (Cotutela),

Date of degree: 19/09/2014

Thesis title: Distributed and Remote Fiber Sensing Assisted by Raman Effect

Thesis director: Orlando Frazão

Thesis co-director: Miguel González-Herráez

Obtained qualification: SOBRESALIENTE CUM LAUDE

Special doctorate award: Yes

Date of award: 04/04/2017

Specialised, lifelong, technical, professional and refresher training (other than formal academic and healthcare studies)

1 Type of training: Course

Training title: Annual Network Meeting and workshop II - Nanophotonics for all optical signal processing workshop (OTAW)

City awarding entity: Stockholm, Sweden

Awarding entity: RISE Acreo

Type of entity: Non-Profit Research Institute

Training manager: Gunnar Jacobsen

End date: 24/05/2016

Duration in hours: 16 hours



- 2** **Type of training:** Course
Training title: Annual Network Meeting and workshop I - Optical Communication Systems with coherent technologies
City awarding entity: Stockholm, Sweden
Awarding entity: RISE Acreo **Type of entity:** Non-Profit Research Institute
Training manager: Gunnar Jacobsen
End date: 11/03/2016 **Duration in hours:** 32 hours
- 3** **Type of training:** Course
Training title: Complimentary Skills Workshop on Presentation Skills, Networking, Career Development And Entrepreneurial Skills
City awarding entity: Birmingham, United Kingdom
Awarding entity: Aston University **Type of entity:** University
Training manager: Jeanette Lilley
End date: 27/01/2016 **Duration in hours:** 16 hours
- 4** **Type of training:** Course
Training title: Complimentary Skills Workshop on Communication Skills, Patenting & Intellectual Property and Project Management
City awarding entity: Birmingham, United Kingdom
Awarding entity: Aston University **Type of entity:** University
Training manager: Jeanette Lilley
End date: 30/10/2015 **Duration in hours:** 16 hours
- 5** **Type of training:** Course
Training title: Light Sciences and Technologies for the new world (LIST)
City awarding entity: Santander, Spain
Awarding entity: Universidad Internacional Menéndez Pelayo **Type of entity:** University
Training manager: José Miguel López-Higuera
End date: 19/06/2015 **Duration in hours:** 30 hours
- 6** **Type of training:** Course
Training title: Annual Intensive PHD Training Course I - Modeling of optical passive/active integrated circuits and networks
City awarding entity: Berlin, Germany
Awarding entity: VPI Photonics **Type of entity:** Business
Training manager: Hadrien Louchet
End date: 30/01/2015 **Duration in hours:** 40 hours
- 7** **Type of training:** Summer School
Training title: Optical Fiber Sensing
City awarding entity: Funchal - Madeira, Região Autónoma da Madeira, Portugal
Awarding entity: Universidade da Madeira // COST **Type of entity:** University // European Agency Association
Aims of the entity: Supporting trans-national cooperation among researchers, engineers and scholars across Europe
Training manager: Luc Thévenaz
End date: 05/09/2012 **Duration in hours:** 18 hours



Attended advanced, improvement and innovative teacher training and new technology courses and seminars focused on improving teaching

Title of course/seminar: An Introduction to learning and teaching in higher education

City organizing entity: Birmingham, United Kingdom

Organising entity: Aston University

Type of entity: University

Start-End date: 28/01/2016 - 29/01/2016

Length: 2 days

Funding programme: Marie-Curie

Provable tasks: The Course was mapped to Descriptor 1 of the UKPSF and covered the following topics:
-Approaches to teaching identity (i.e. ideologies of teaching) -The impact of epistemology on teaching styles; e.g. science, sociology, business (e.g. critical pedagogy) -Enhancing equality and diversity (incl. awareness of Equality Act) -Designing effective assessment -The UK context and the role of the external examiner in quality assurance.

Aims of the stay: Post-doctoral

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
French	A1	A1	A1	A1	A1
English	C2	C2	C2	C2	C2
Portuguese	C2	C2	C2	C2	C2
Spanish	C2	C2	C2	C2	C2

Teaching experience

Experience supervising doctoral thesis and/or final year projects

- Project title:** Diseño e implementación de un controlador para un amplificador óptico EDFA con fines didácticos
Type of project: End of course project
Co-director of thesis: Sonia Martin-Lopez
Entity: Universidad de Alcalá **Type of entity:** University
Student: Pablo Feroso Santos
Obtained qualification: 10
Date of reading: 09/07/2020
- Project title:** Chirped-Pulse Phase-Sensitive Optical Time Domain Reflectometry
Type of project: Doctoral thesis
Co-director of thesis: Sonia Martin-Lopez
Entity: Universidad de Alcalá **Type of entity:** University
Student: Juan Pastor Graells
Date of reading: 03/10/2018
Quality recognition: Yes



Teaching experience in courses and seminars for university teacher training

- 1** **Type of event:** Seminar
Name of the event: Reunión de Fibras Ópticas y Procesado Señal (Workshop Optical Fibers and Signal Processing)
City organizing entity: Valencia, Valencian Community, Spain
Organising entity: Universitat de València **Type of entity:** University
Aims of the course: Technical Talk
Target group profile: Students of Universitat de València
Hours of teaching: 10 **Teaching language:** English
Teaching date: 22/11/2019
Type of participation: Participatory - invited/keynote talk
Corresponding author: Yes
- 2** **Type of event:** Seminar
Name of the event: Phase-sensitive OTDR for Distributed Acoustic Fiber Sensing: From Theory to Application
City organizing entity: Madrid, Community of Madrid, Spain
Organising entity: Universidad Carlos III de Madrid **Type of entity:** University
Target group profile: Students of "Máster Universitario Ingeniería de Sistemas Electrónicos y Aplicaciones"
Hours of teaching: 1,5 **Teaching language:** English
Teaching date: 12/04/2019
Type of participation: Participatory - invited/keynote talk
Corresponding author: Yes
- 3** **Type of event:** Seminar
Name of the event: Phase-sensitive OTDR for Distributed Acoustic Fiber Sensing: From Theory to Application
City organizing entity: Madrid, Community of Madrid, Spain
Organising entity: Universidad Carlos III de Madrid **Type of entity:** University
Target group profile: Students of "Máster Universitario Ingeniería de Sistemas Electrónicos y Aplicaciones"
Hours of teaching: 1,5 **Teaching language:** English
Teaching date: 16/03/2018
Type of participation: Participatory - invited/keynote talk
Corresponding author: Yes
- 4** **Type of event:** Seminar
Name of the event: Making the transition: Working in the Photonics industry
City organizing entity: Madrid, Community of Madrid, Spain
Organising entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
Target group profile: Technical Talk - Within European Project ICONE
Hours of teaching: 1 **Teaching language:** English
Teaching date: 19/10/2017
Type of participation: Participatory - invited/keynote talk
Corresponding author: Yes
- 5** **Type of event:** Summer School - Within European Project FINESSE
Name of the event: Recent progress in phase-sensitive OTDR
City organizing entity: Alcalá de Henares, Community of Madrid, Spain
Organising entity: Universidad de Alcalá **Type of entity:** University



Aims of the course: Summer School on Distributed Sensing Methods

Target group profile: Technical Talk

Hours of teaching: 1,5

Teaching language: English

Teaching date: 13/09/2017

Type of participation: Participatory - invited/keynote talk

Corresponding author: Yes

6 **Type of event:** Seminar

Name of the event: Sensores de fibra óptica aplicados a la ingeniería civil

City organizing entity: Alcalá de Henares, Spain

Organising entity: Universidad de Alcalá

Type of entity: University

Aims of the course: CICLO CONFERENCIAS Y SEMINARIOS

Target group profile: Technical Talk

Hours of teaching: 2

Teaching date: 22/11/2016

Type of participation: Participatory - invited/keynote talk

Corresponding author: Yes

7 **Type of event:** Seminar

Name of the event: Phase-sensitive optical time domain reflectometry for distributed vibration sensing along optical fibers

City organizing entity: Porto, Norte, Portugal

Organising entity: SPIE Student Chapter of Universidade do Porto

Aims of the course: Technical Talk

Hours of teaching: 1

Teaching date: 29/01/2014

Type of participation: Participatory - invited/keynote talk

Corresponding author: Yes

8 **Type of event:** Seminar

Name of the event: Phase-sensitive optical time domain reflectometry for distributed vibration sensing along optical fibers: Working principles and operation

City organizing entity: Alcalá de Henares, Spain

Organising entity: Universidad de Alcalá

Type of entity: University

Aims of the course: CICLO CONFERENCIAS Y SEMINARIOS

Target group profile: Technical Talk

Hours of teaching: 2

Teaching date: 15/01/2014

Type of participation: Participatory - invited/keynote talk

Corresponding author: Yes

Other activities/achievements not included above

1 **Description of the activity:** Currently co-supervising a PhD thesis (THESIS NOT YET PRESENTED)// Thesis

Title: "Distributed gas sensing using phase-OTDR and specialty fibers" // Student: Regina Teixeira Magalhaes

City of activity: Alcalá de Henares, Community of Madrid, Spain

Organising entity: Universidad de Alcalá

Type of entity: University

End date: 2020



- 2 Description of the activity:** Currently co-supervising a TFG (Trabajo Fin Grado) (THESIS NOT YET PRESENTED)// Thesis Title: "DISEÑO E IMPLEMENTACIÓN DE UN CONTROLADOR PARA UN AMPLIFICADOR ÓPTICO EDFA CON FINES DIDÁCTICOS" // Student: Pablo Feroso Santos
City of activity: Alcalá de Henares, Community of Madrid, Spain
Organising entity: Universidad de Alcalá **Type of entity:** University
End date: 2020
- 3 Description of the activity:** Currently co-supervising a TFM (Trabajo Fin de Máster) (THESIS NOT YET PRESENTED)// Thesis Title: "DESARROLLO E INTEGRACIÓN DE UN INTERROGADOR BOTDA PARA LA MEDIDA DE TEMPERATURA Y DEFORMACIONES DISTRIBUIDAS EN FIBRA ÓPTICA" // Student: Carlos Arias Vázquez
City of activity: Alcalá de Henares, Community of Madrid, Spain
Organising entity: Universidad de Alcalá **Type of entity:** University
End date: 2020

Scientific and technological experience

Scientific or technological activities

R&D projects funded through competitive calls of public or private entities

- 1 Name of the project:** TECNICAS AVANZADAS DE GENERACION, AMPLIFICACION Y MEDIDA DE SEÑALES OPTICAS COMPLEJAS EN FIBRA OPTICA
Entity where project took place: AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (CSIC) **Type of entity:** R&D Centre
City of entity: Community of Madrid, Spain
Name principal investigator (PI, Co-PI....): Juan D. Ania-Castañon
Funding entity or bodies: Ministerio de Ciencia, Innovación y Universidades (MICINN)
Start-End date: 01/01/2019 - 31/12/2022
Total amount: 213.807 €
- 2 Name of the project:** FINESSE (FIBRE NERVE SYSTEMS FOR SENSING)- ITN MARIE SKLODOWSKA-CURIE
Entity where project took place: Universidad de Alcalá **Type of entity:** University
City of entity: Spain
Name principal investigator (PI, Co-PI....): Miguel González-Herráez
Funding entity or bodies: EU Commission
Start-End date: 01/10/2016 - 30/09/2020 **Duration:** 4 years
Participating entity/entities: ACREO; ANDRA; EPFL; Centro de Investigación Príncipe Felipe; IPHT; TAU; Universidad de Alcalá; UCAM; UPVLC; VUB
Total amount: 3.880.324,44 € **Sub-project amount:** 495.746 €



- 3** **Name of the project:** MONITORIZACIÓN DE DIQUES Y FLUJOS DE ESCOMBROS MEDIANTE NOVEDOSOS SENSORES DE FIBRA ÓPTICA
Entity where project took place: Universidad de Alcalá **Type of entity:** University
City of entity: Spain
Name principal investigator (PI, Co-PI....): Luca Palmieri; Miguel Gonzalez-Herraez
Funding entity or bodies: European Project
Start-End date: 18/04/2016 - 17/04/2019 **Duration:** 3 years - 6 months
Participating entity/entities: Delf University of Technology (The Netherlands)(TUDELFT); National Research Council-Research Institute for Geo-Hydrological Protection (Italy)(IRPD-CNR); Universidad de Alcalá; University of Padova (Italy)(UNIPD)
Total amount: 1.134.145 € **Sub-project amount:** 149.200 €
- 4** **Name of the project:** SENSORES E INSTRUMENTACIÓN EN TECNOLOGÍAS FOTÓNICAS (SINFOTON)
Entity where project took place: Universidad de Alcalá **Type of entity:** University
City of entity: Community of Madrid, Spain
Name principal investigator (PI, Co-PI....): Fernando Naranjo (UAH); Carmen Vázquez (UC3M)
Start-End date: 01/10/2014 - 30/09/2018 **Duration:** 4 years
Participating entity/entities: CSIC; Universidad de Alcalá; Universidad Carlos III de Madrid; Universidad Politécnica de Madrid; Universidad Rey Juan Carlos
Total amount: 892.925 € **Sub-project amount:** 46.252 €
- 5** **Name of the project:** U-FINE: Ubiquitous optical Fiber NERves
Entity where project took place: Universidad de Alcalá **Type of entity:** University
City of entity: Spain
Name principal investigator (PI, Co-PI....): Miguel Gonzalez-Herraez
Nº of researchers: 10
Funding entity or bodies: European Research Council
Start-End date: 01/12/2012 - 31/05/2018 **Duration:** 4 years - 6 months
Participating entity/entities: Universidad de Alcalá
Total amount: 1.500.000 €
- 6** **Name of the project:** (ICONE) Allied Initiative for Training and Education in Coherent Optical Networks
Geographical area: European Union
Entity where project took place: (FOCUS SL) Fiber Optics Consulting Services and Technologies S.L. **Type of entity:** Business
City of entity: Spain
Name principal investigator (PI, Co-PI....): Andrew Ellis
Nº of researchers: 21
Funding entity or bodies: European Commission
Name of the programme: Marie Curie - Networks for Initial Training (ITN)
Start-End date: 01/02/2014 - 31/01/2018
Participating entity/entities: ACREO; Aston University; Belgacom; DTU; FOCUS; KTH; O-CSIC; PoITel; UCL; VPI
Total amount: 4.097.330,6 € **Sub-project amount:** 221.052,7 €



- 7** **Name of the project:** DESAFIO- DEtección temprana de amenazas para infraestructuras críticas usando SistemAs distribuidos de Fibra Óptica
Entity where project took place: Universidad de Alcalá **Type of entity:** University
City of entity: Ministerio de Ciencia e Innovación, Spain
Name principal investigator (PI, Co-PI....): Sonia Martín-López
Nº of researchers: 5
Funding entity or bodies: Ministerio de Ciencia e Innovación. Investigación **Type of entity:** Ministerio
City funding entity: Community of Madrid, Spain
Start-End date: 01/01/2014 - 31/12/2017
Total amount: 52.998 €
- 8** **Name of the project:** (CiSTer) Civil Security Technologies based in Optical Fibres
Entity where project took place: Universidad de Alcalá **Type of entity:** University
City of entity: Spain
Name principal investigator (PI, Co-PI....): Miguel Gonzalez-Herraez
Nº of researchers: 8
Funding entity or bodies: Ministerio de Ciencia e Innovación. Investigación **Type of entity:** Body, others
City funding entity: Spain
Start-End date: 01/01/2013 - 31/12/2015
Participating entity/entities: CSIC; Universidad de Alcalá
Total amount: 343.863 €
- 9** **Name of the project:** ECOAL – Ecological Management of Coal Waste Piles in Combustion
Entity where project took place: INESC Porto (now INESC TEC) **Type of entity:** Non-profit research institution
City of entity: Portugal
Name principal investigator (PI, Co-PI....): José Manuel-Baptista
Nº of researchers: 7
Funding entity or bodies: European Union
Start-End date: 01/11/2012 - 31/12/2014
Participating entity/entities: Centre National de la Recherche Scientifique (CNRS) (FR); INESC Porto (now INESC TEC); Universidad Publica de Navarra (ES); Universidad de Alcalá; Universidade do Porto
Total amount: 875.275 €
- 10** **Name of the project:** FACTOTEM2_CM Fotonica Aplicada a la Creación de Tecnologías Ópticas y su Tranferencia a las Empresas Madrileñas-II
Entity where project took place: Universidad de Alcalá **Type of entity:** University
City of entity: Spain
Name principal investigator (PI, Co-PI....): Miguel Gonzalez-Herraez
Funding entity or bodies: Comunidad de Madrid **Type of entity:** Body, others
Start-End date: 01/01/2010 - 31/05/2014



Participating entity/entities: CSIC; Universidad de Alcalá; Universidad Carlos III de Madrid; Universidad Politécnica de Madrid; Universidad Rey Juan Carlos

Total amount: 1.046.095 €

R&D non-competitive contracts, agreements or projects with public or private entities

- 1** **Name of the project:** [PI] Consulting and support to the industrialization of distributed fibre optic sensors applied to the monitoring of infrastructures
Degree of contribution: Coordinator of total project, network or consortium
Name principal investigator (PI, Co-PI....): Hugo Fidalgo Martins
Nº of researchers: 1
Participating entity/entities: ARAGON PHOTONICS LABS S.L.; INSTITUTO DE OPTICA DAZA DE VALDES (IO-CSIC)
Funding entity or bodies:
ARAGON PHOTONICS LABS S.L. **Type of entity:** Business
City funding entity: Zaragoza, Spain
Start date: 01/12/2019 **Duration:** 1 year
Total amount: 48.572,62 €
- 2** **Name of the project:** Research and development agreement of DOFS technologies beyond the current state of the art
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Sonia Martin-Lopez; Miguel Gonzalez-Herraez
Nº of researchers: 7
Participating entity/entities: Universidad de Alcalá
Funding entity or bodies:
OMNISENS S.A. **Type of entity:** Business
City funding entity: Morges, Switzerland
ARAGON PHOTONICS LABS S.L. **Type of entity:** Business
City funding entity: Zaragoza, Spain
Start date: 05/03/2019 **Duration:** 4 years
Total amount: 320.000 €
- 3** **Name of the project:** [PI] Uso de equipos de sensado acústico distribuido (DAS) para la detección de fugas en canalizaciones de agua
Degree of contribution: Coordinator of total project, network or consortium
Name principal investigator (PI, Co-PI....): Hugo Fidalgo Martins
Nº of researchers: 6
Participating entity/entities: ARAGON PHOTONICS LABS S.L.; Universidad de Alcalá
Funding entity or bodies:
ARAGON PHOTONICS LABS S.L. **Type of entity:** Business
City funding entity: Zaragoza, Spain
Start date: 15/02/2019 **Duration:** 7 days
Total amount: 4.764,31 €
- 4** **Name of the project:** ASESORIA Y SOPORTE A PROYECTOS DE MONITORIZACIÓN DE INFRAESTRUCTURAS EMPLEANDO SEANDO DISTRIBUIDO SOBRE FIBRA OPTICA
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Sonia Martins-Lopez; Miguel Gonzalez-Herraez



Nº of researchers: 6

Participating entity/entities: ARAGON PHOTONICS LABS S.L.; Universidad de Alcalá

Funding entity or bodies:

ARAGON PHOTONICS LABS S.L.

Type of entity: Business

City funding entity: Zaragoza, Spain

Start date: 05/02/2019

Duration: 1 year

Total amount: 45.645,23 €

5 Name of the project: [PI] Estudio de viabilidad de medida DTS en túneles de metro

Degree of contribution: Coordinator of total project, network or consortium

Name principal investigator (PI, Co-PI....): Hugo Fidalgo Martins

Nº of researchers: 6

Participating entity/entities: ARAGON PHOTONICS LABS S.L.; Universidad de Alcalá

Funding entity or bodies:

ARAGON PHOTONICS LABS S.L.

Type of entity: Business

City funding entity: Zaragoza, Spain

Start date: 21/01/2019

Duration: 1 month

Total amount: 2.656,51 €

6 Name of the project: Desarrollo con sensores acústicos para la detección de fugas en canalizaciones de aguas

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Sonia Martin Lopez

Nº of researchers: 4

Participating entity/entities: EMPRESA METROPOLITANA DE ABASTECIMIENTO Y SANEAMIENTO DE AGUAS DE SEVILLA S.A. ; Universidad de Alcalá

Funding entity or bodies:

EMPRESA METROPOLITANA DE ABASTECIMIENTO Y SANEAMIENTO DE AGUAS DE SEVILLA S.A.

Type of entity: Business

City funding entity: Sevilla, Spain

Start date: 28/11/2018

Duration: 9 months

Total amount: 5.949,69 €

7 Name of the project: Training in Advanced Distributed Optical Fiber Sensing Techniques, professional, economical and practical aspects

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Miguel Gonzalez Herraiez

Nº of researchers: 5

Participating entity/entities: INPHOTECH SPOLKA; Universidad de Alcalá

Funding entity or bodies:

INPHOTECH SPOLKA

Type of entity: Business

City funding entity: Warsaw, Poland

Start date: 20/07/2018

Duration: 7 days

Total amount: 8.200 €

8 Name of the project: Desarrollo con sensores acústicos para la detección de fugas en canalizaciones de aguas

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Sonia Martin Lopez

**Nº of researchers:** 4**Participating entity/entities:** EMPRESA METROPOLITANA DE ABASTECIMIENTO Y SANEAMIENTO DE AGUAS DE SEVILLA S.A. ; Universidad de Alcalá**Funding entity or bodies:**

EMPRESA METROPOLITANA DE ABASTECIMIENTO Y SANEAMIENTO DE AGUAS DE SEVILLA S.A.

Type of entity: Business**City funding entity:** Sevilla, Spain**Start date:** 27/04/2018**Duration:** 2 months**Total amount:** 1.643,6 €**9 Name of the project:** Desarrollo de nuevas técnicas de sensado con fibra óptica**Type of project:** Industrial research**Degree of contribution:** Researcher**City of entity:** Spain**Name principal investigator (PI, Co-PI....):** Pedro Corredera**Funding entity or bodies:**

FIBER OPTICS CONSULTING SERVICES AND TECHNOLOGIES S. L. (FOCUS S.L.)

Type of entity: Business**City funding entity:** Spain**Start date:** 03/05/2017**Duration:** 6 months - 12 days**Total amount:** 11.376,99 €**10 Name of the project:** ASESORAMIENTO PARA EL DESARROLLO DE SENSORES DE FIBRA ÓPTICA**Degree of contribution:** Researcher**Name principal investigator (PI, Co-PI....):** Sonia Martin-Lopez**Nº of researchers:** 8**Participating entity/entities:** FOCUS S.L.; Universidad de Alcalá**Funding entity or bodies:**

FIBER OPTICS CONSULTING SERVICES AND TECHNOLOGIES S. L. (FOCUS S.L.)

Type of entity: Business**City funding entity:** Madrid, Spain**Start date:** 10/12/2016**Duration:** 1 year**Total amount:** 7.260 €**11 Name of the project:** Desarrollo de nuevas técnicas y sistemas de información para la REhabilitación sostenible de Pavimentos de carreteras (REPARA 2.0)**Degree of contribution:** Researcher**Name principal investigator (PI, Co-PI....):** Miguel Gonzalez-Herraez**Nº of researchers:** 9**Participating entity/entities:** CHM Obras e Infraestructuras, S.A.; Universidad de Alcalá**Funding entity or bodies:**

CHM Obras e Infraestructuras

Type of entity: Business**City funding entity:** Madrid, Spain**Start date:** 01/01/2016**Duration:** 2 years**Total amount:** 57.747,25 €**12 Name of the project:** DESARROLLO DE SENSORES DE FIBRA ÓPTICA**Degree of contribution:** Researcher**Name principal investigator (PI, Co-PI....):** Sonia Martin-Lopez



Nº of researchers: 8

Participating entity/entities: FOCUS S.L.; Universidad de Alcalá

Funding entity or bodies:

FIBER OPTICS CONSULTING SERVICES AND TECHNOLOGIES S. L. (FOCUS S.L.)

Type of entity: Business

City funding entity: Madrid, Spain

Start date: 10/12/2015

Duration: 1 year

Total amount: 14.520 €

13 Name of the project: Sensores distribuidos de fibra óptica

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI...): Sonia Martin-Lopez

Nº of researchers: 8

Participating entity/entities: FOCUS S.L.; Universidad de Alcalá

Funding entity or bodies:

FIBER OPTICS CONSULTING SERVICES AND TECHNOLOGIES S. L. (FOCUS S.L.)

Type of entity: Business

City funding entity: Madrid, Spain

Start date: 24/02/2014

Duration: 1 year

Total amount: 14.520 €

14 Name of the project: DETECCIÓN TEMPRANA DE AMENAZAS A LA INTEGRIDAD DE GASEODUCTOS USANDO TECNOLOGÍA DE FIBRA ÓPTICA

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI...): Javier Macías Guarasa; Sonia Martín-López

Nº of researchers: 13

Participating entity/entities: FOCUS S.L.; Universidad de Alcalá

Funding entity or bodies:

FIBER OPTICS CONSULTING SERVICES AND TECHNOLOGIES S. L. (FOCUS S.L.)

Type of entity: Business

City funding entity: Madrid, Spain

Start date: 17/12/2013

Duration: 2 years - 6 months

Total amount: 84.000 €

15 Name of the project: TECCON (Tecnología de sensores em fibras ópticas para supervisão, controlo e protecção de sistemas de energia eléctrica)

Entity where project took place: INESC Porto (now INESC TEC)

Degree of contribution: Researcher

Entity where project took place: INESC Porto (now INESC TEC) **Type of entity:** Non-profit research

City of entity: Porto, Portugal

Name principal investigator (PI, Co-PI...): Pedro Jorge

Participating entity/entities: INESC Porto (Now INESC TEC)

Start date: 01/05/2010

Duration: 3 years - 8 months



Results

Industrial and intellectual property

- 1** **Title registered industrial property:** Distributed characterization system and method of variations of the refractive index of an optical fiber
Type of industrial property: Patent of invention
Inventors/authors/obtainers: Andrés García Ruiz; Juan Pastor-Graells; Sonia Martín-López; Miguel González-Herráez; Aitor Villafranca Velasco; Hugo Fidalgo Martins
Entity holder of rights: UNIVERSIDAD DE ALCALA / CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (CSIC) / FIBER OPTICS CONSULTING SERVICES AND TECHNOLOGIES, S.L. (FOCUS, S.L.)
Nº of application: WO2017093588
Country of inscription: Spain
Date of register: 30/11/2015
Spanish patent: Yes
PCT patent: Yes
- 2** **Title registered industrial property:** System and method of distributed characterization of dispersion profile of an optical fiber
Type of industrial property: Patent of invention
Inventors/authors/obtainers: JUAN PASTOR-GRAELLS; SONIA MARTÍN-LÓPEZ; MIGUEL GONZÁLEZ-HERRÁEZ; AITOR VILLAFRANCA VELASCO; PEDRO CORREDERA GUILLEN; HUGO FIDALGO MARTINS
Entity holder of rights: UNIVERSIDAD DE ALCALA / CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (CSIC) / FIBER OPTICS CONSULTING SERVICES AND TECHNOLOGIES, S.L. (FOCUS, S.L.)
Nº of application: WO2016193524
Country of inscription: Spain
Date of register: 05/06/2015
Spanish patent: Yes
PCT patent: Yes
- 3** **Title registered industrial property:** Method and apparatus for measuring the local birefringence along an optical waveguide
Type of industrial property: Patent of invention
Inventors/authors/obtainers: Luc Thevenaz; Miguel Gonzalez-Herraez; Marcelo Afonso Soto Hernandez; Hugo Fidalgo Martins; Xin Lu
Entity holder of rights: École Polytechnique Fédérale de Lausanne/ Universidad de Alcalá
Nº of application: WO2016042507
Country of inscription: Switzerland
Date of register: 17/09/2014
PCT patent: Yes



Scientific and technological activities

Scientific production

Publications, scientific and technical documents

- 1** J. {Nuño}; H. F. {Martins}; S. {Martin-Lopez}; J. D. {Ania-Castañon}; M. {Gonzalez-Herraez}. Distributed Sensors Assisted by Modulated First-Order Raman Amplification. *Journal of Lightwave Technology*. 39 - 1, pp. 328 - 335. 01/2021. ISSN 1558-2213
- Type of production:** Scientific paper **Format:** Journal
Impact source: ISI **Category:** OPTICS - SCIE
Impact index in year of publication: 4.288 (2019) **Journal in the top 25%:** Yes
Position of publication: 14 **No. of journals in the cat.:** 97
- 2** M. {Soriano-Amat}; M. A. {Soto}; V. {Duran}; H. F. {Martins}; S. {Martin-Lopez}; M. {Gonzalez-Herraez}; M. R. {Fernández-Ruiz}. Common-Path Dual-Comb Spectroscopy Using a Single Electro-Optic Modulator. *Journal of Lightwave Technology*. 38 - 18, pp. 5107 - 5115. 09/2020. ISSN 1558-2213
- Type of production:** Scientific paper **Format:** Journal
Impact source: ISI **Category:** OPTICS - SCIE
Impact index in year of publication: 4.288 (2019) **Journal in the top 25%:** Yes
Position of publication: 14 **No. of journals in the cat.:** 97
- 3** L. {Marcon}; M. A. {Soto}; M. {Soriano-Amat}; L. {Costa}; M. R. {Fernandez-Ruiz}; H. F. {Martins}; L. {Palmieri}; M. {Gonzalez-Herraez}. High-Resolution Chirped-Pulse ϕ -OTDR by Means of Sub-Bands Processing. *Journal of Lightwave Technology*. 38 - 15, pp. 4142 - 4149. 08/2020. ISSN 1558-2213
- Type of production:** Scientific paper **Format:** Journal
Impact source: ISI **Category:** OPTICS - SCIE
Impact index in year of publication: 4.288 (2019) **Journal in the top 25%:** Yes
Position of publication: 14 **No. of journals in the cat.:** 97
- 4** Leonardo Marcon; Miguel Soriano-Amat; Riccardo Veronese; Andres Garcia-Ruiz; Marco Calabrese; Luis Costa; María Rosario Fernández-Ruiz; Hugo F. Martins; Luca Palmieri; Miguel Gonzalez-Herraez. Analysis of disturbance-induced "virtual" perturbations in chirped pulse ϕ -OTDR. *Journal of Lightwave Technology*. Early Access, OSA, 2020. Available on-line at: <<https://ieeexplore.ieee.org/document/8946733>>. ISSN 07338724
- Type of production:** Scientific paper **Format:** Journal
Position of signature: 8 **Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 10 **Corresponding author:** No
Impact source: ISI **Category:** OPTICS - SCIE
Impact index in year of publication: 4.288 (2019) **Journal in the top 25%:** Yes
Position of publication: 14 **No. of journals in the cat.:** 97
Source of citations: Google Scholar **Citations:** 0

- 5** María R. Fernández-Ruiz; Marcelo A. Soto; Ethan F. Williams; Sonia Martin-Lopez; Zhongwen Zhan; Miguel Gonzalez-Herraez; Hugo F. Martins. Distributed acoustic sensing for seismic activity monitoring. *APL Photonics*. 5 - 3, pp. 030901 - 030901. 2020. Available on-line at: <<https://doi.org/10.1063/1.5139602>>.
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** OPTICS - SCIE
Impact index in year of publication: 4.864 (2019) **Journal in the top 25%:** Yes
Position of publication: 13 **No. of journals in the cat.:** 97
- 6** L. Costa; Regina Magalhães; Luca Palmieri; H. F. Martins; S. Martin-Lopez; M. Gonzalez-Herraez. Fast and direct measurement of the birefringence profile in standard single-mode optical fibers. *Optics Letters*. Early Access, OSA, 2020. ISSN 01469592
Type of production: Scientific paper **Format:** Journal
Position of signature: 4 **Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 6 **Corresponding author:** No
Impact source: ISI **Category:** OPTICS - SCIE
Impact index in year of publication: 3.714 (2019) **Journal in the top 25%:** Yes
Position of publication: 18 **No. of journals in the cat.:** 97
Source of citations: Google Scholar **Citations:** 0
- 7** Regina Magalhães; Luis Costa; Sonia Martin-Lopez; Miguel Gonzalez-Herraez; Alejandro F. Braña; Hugo F. Martins. Long-Range Distributed Solar Irradiance Sensing Using Optical Fibers. *Sensors*. 20 - 3, 2020. Available on-line at: <<https://www.mdpi.com/1424-8220/20/3/908>>. ISSN 1424-8220
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** INSTRUMENTS & INSTRUMENTATION - SCIE
Impact index in year of publication: 3.275 (2019) **Journal in the top 25%:** Yes
Position of publication: 15 **No. of journals in the cat.:** 64
- 8** X. Wang; E.F. Williams; M. Karrenbach; M.G. Herráez; H.F. Martins; Z. Zhan. Rose parade seismology: Signatures of floats and bands on optical fiber. *Seismological Research Letters*. 91 - 4, pp. 2395 - 2398. 2020. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089547070&doi=10.1785%2f0220200091&partnerID=40&md5=6861f40a77a226ffef9177ce054c846b>>.
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** GEOCHEMISTRY & GEOPHYSICS - SCIE
Impact index in year of publication: 3.131 (2019) **Journal in the top 25%:** No
Position of publication: 29 **No. of journals in the cat.:** 85
- 9** M.R. Fernández-Ruiz; H.F. Martins; S. Martin-Lopez; M. Gonzalez-Herraez. Submarine seismic tomography using optical fibres. *Europhysics News*. 51 - 3, pp. 22 - 24. 2020. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087854922&doi=10.1051%2fepn%2f2020304&partnerID=40&md5=cb92f717ed809613f1922e43c5dd012a>>.
Type of production: Scientific paper **Format:** Journal
Impact source: SCOPUS **Category:** General Physics and Astronomy
Impact index in year of publication: **Journal in the top 25%:** No
Position of publication: 166 **No. of journals in the cat.:** 224



- 10** Regina Magalhães; João Pereira; Oleksandr Tarasenko; Sonia Martin-Lopez; Miguel González-Herráez; Walter Margulis; Hugo Fidalgo Martins. Towards Distributed Measurements of Electric Fields Using Optical Fibers: Proposal and Proof-Of-Concept Experiment. *Sensors*. 20 - 16, 2020. Available on-line at: <<https://www.mdpi.com/1424-8220/20/16/4461>>. ISSN 1424-8220
- Type of production:** Scientific paper
Format: Journal
Impact source: ISI
Category: INSTRUMENTS & INSTRUMENTATION - SCIE
Impact index in year of publication: 3.275 (2019)
Journal in the top 25%: Yes
Position of publication: 15
No. of journals in the cat.: 64
- 11** Williams Ethan F.; María R. Fernández-Ruiz; Regina Magalhaes; Roel Vanthillo; Zhongwen Zhan; Miguel Gonzalez-Herraez; Hugo F. Martins. Distributed sensing of microseisms and teleseisms with submarine dark fibers. *Nature Communications*. 10 - 1, pp. 5778. *Nature Research*, 18/12/2019. Available on-line at: <<https://doi.org/10.1038/s41467-019-13262-7>>. ISSN 2041-1723
- Type of production:** Scientific paper
Format: Journal
Position of signature: 7
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 7
Corresponding author: No
Impact source: ISI
Category: MULTIDISCIPLINARY SCIENCES - SCIE
Impact index in year of publication: 11.878 (2018)
Journal in the top 25%: Yes
Position of publication: 5
No. of journals in the cat.: 69
Source of citations: Google Scholar
Citations: 0
- 12** A. Garcia-Ruiz; A. Morana; L. Costa; H. F. Martins; S. Martin-Lopez; M. Gonzalez-Herraez; A. Boukenter; Y. Ouerdane; S. 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 - 21, pp. 5286 - 5289. OSA, 01/11/2019. Available on-line at: <<https://www.osapublishing.org/ol/abstract.cfm?uri=ol-44-21-5286>>. ISSN 01469592
- Type of production:** Scientific paper
Format: Journal
Position of signature: 4
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 9
Corresponding author: No
Impact source: ISI
Category: OPTICS - SCIE
Impact index in year of publication: 3.866 (2018)
Journal in the top 25%: Yes
Position of publication: 16
No. of journals in the cat.: 95
Source of citations: Google Scholar
Citations: 0
- 13** Javier Tejedor; Javier Macias-Guarasa; Hugo F. Martins; Sonia Martín-López; Miguel González-Herráez. A Contextual GMM-HMM Smart Fiber Optic Surveillance System for Pipeline Integrity Threat Detection. *Journal of Lightwave Technology*. 37 - 18, pp. 4514 - 4522. OSA, 15/09/2019. Available on-line at: <<https://www.osapublishing.org/jlt/abstract.cfm?uri=jlt-37-18-4514>>. ISSN 07338724
- Type of production:** Scientific paper
Format: Journal
Position of signature: 3
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 5
Corresponding author: No
Impact source: ISI
Category: OPTICS - SCIE
Impact index in year of publication: 4.162 (2018)
Journal in the top 25%: Yes
Position of publication: 13
No. of journals in the cat.: 95
Source of citations: Google Scholar
Citations: 0

- 14** Hari Datta Bhatta; Luis Costa; Andres Garcia-Ruiz; María Rosario Fernández-Ruiz; Hugo F. Martins; Moshe Tur; Miguel Gonzalez-Herraez. Dynamic Measurements of 1000 Microstrains Using Chirped-Pulse Phase-Sensitive Optical Time-Domain Reflectometry. *Journal of Lightwave Technology*. 37 - 18, pp. 4888 - 4895. OSA, 15/09/2019. Available on-line at: <<https://www.osapublishing.org/jlt/abstract.cfm?uri=jlt-37-18-4888>>. ISSN 07338724
- Type of production:** Scientific paper
Position of signature: 5
- Total no. authors:** 7
Impact source: ISI
Impact index in year of publication: 4.162 (2018)
Position of publication: 13
- Source of citations:** Google Scholar
- Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No
Category: OPTICS - SCIE
Journal in the top 25%: Yes
No. of journals in the cat.: 95
Citations: 4
- 15** Luis Costa; Hugo F. Martins; Sonia Martin-Lopez; María Rosario Fernández-Ruiz; Miguel Gonzalez-Herraez. Fully Distributed Optical Fiber Strain Sensor With 10–12 $\square/\sqrt{\text{Hz}}$ Sensitivity. *Journal of Lightwave Technology*. 37 - 18, pp. 4487 - 4495. OSA, 15/09/2019. Available on-line at: <<https://www.osapublishing.org/jlt/abstract.cfm?URI=jlt-37-18-4487>>. ISSN 07338724
- Type of production:** Scientific paper
Position of signature: 2
- Total no. authors:** 5
Impact source: ISI
Impact index in year of publication: 4.162 (2018)
Position of publication: 13
- Source of citations:** Google Scholar
- Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No
Category: OPTICS - SCIE
Journal in the top 25%: Yes
No. of journals in the cat.: 95
Citations: 0
- 16** Andres Garcia-ruiz; Hugo F. Martins; Regina Magalhães; João M. B. Pereira; Oleksandr Tarasenko; Lars Norin; Walter Margulis; Sonia Martin-Lopez; Miguel Gonzalez-Herraez. Hermetic Carbon Coatings for Electro-Thermal All-Fiber Phase Modulators. *Journal of Lightwave Technology*. 37 - 18, pp. 4567 - 4572. OSA, 15/09/2019. Available on-line at: <<https://www.osapublishing.org/jlt/abstract.cfm?uri=jlt-37-18-4567>>. ISSN 07338724
- Type of production:** Scientific paper
Position of signature: 2
- Total no. authors:** 9
Impact source: ISI
Impact index in year of publication: 4.162 (2018)
Position of publication: 13
- Source of citations:** Google Scholar
- Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No
Category: OPTICS - SCIE
Journal in the top 25%: Yes
No. of journals in the cat.: 95
Citations: 0
- 17** Regina Magalhães; Andres Garcia-ruiz; Hugo F. Martins; João Pereira; Walter Margulis; Sonia Martin-Lopez; Miguel Gonzalez-Herraez. Fiber-based distributed bolometry. *Optics Express*. 27 - 4, pp. 4317 - 4328. OSA, 18/02/2019. Available on-line at: <<http://www.opticsexpress.org/abstract.cfm?URI=oe-27-4-4317>>. ISSN 10944087
- Type of production:** Scientific paper
Position of signature: 3
- Total no. authors:** 7
Impact source: ISI
Impact index in year of publication: 3.561 (2018)
- Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No
Category: OPTICS - SCIE
Journal in the top 25%: Yes

**Position of publication:** 20**No. of journals in the cat.:** 95**Source of citations:** Google Scholar**Citations:** 2

- 18** María Rosario Fernández-Ruiz; Hugo F. Martins; Luis Costa; Sonia Martin-Lopez; Miguel Gonzalez-Herraez. Steady-Sensitivity Distributed Acoustic Sensors. Journal of Lightwave Technology. 36 - 23, pp. 5690 - 5696. OSA, 01/12/2018. Available on-line at: <<http://jlt.osa.org/abstract.cfm?URI=jlt-36-23-5690>>. ISSN 07338724

Type of production: Scientific paper**Format:** Journal**Position of signature:** 2**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Total no. authors:** 5**Corresponding author:** No**Impact source:** ISI**Category:** OPTICS - SCIE**Impact index in year of publication:** 4.162 (2018)**Journal in the top 25%:** Yes**Position of publication:** 13**No. of journals in the cat.:** 95**Source of citations:** Google Scholar**Citations:** 6

- 19** M.R. Fernández-Ruiz; J. Pastor-Graells; H.F. Martins; A. Garcia-Ruiz; S. Martin-Lopez; M. Gonzalez-Herraez. Laser Phase-noise Cancellation in Chirped-pulse Distributed Acoustic Sensors. Journal of Lightwave Technology. 36 - 4, pp. 979 - 985. Institute of Electrical and Electronics Engineers Inc., 15/02/2018. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85032456304&doi=10.1109%2fJLT.2017.2766688&partnerID=40&md5=6d6fa37048526c772f0e95942278a75a>>. ISSN 07338724

Type of production: Scientific paper**Format:** Journal**Position of signature:** 3**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Total no. authors:** 6**Corresponding author:** Yes**Impact source:** ISI**Category:** OPTICS - SCIE;**Impact index in year of publication:** 4.162 (2018)**Journal in the top 25%:** Yes**Position of publication:** 13**No. of journals in the cat.:** 95**Source of citations:** Google Scholar**Citations:** 23

- 20** Javier Tejedor; Javier Macias-Guarasa; Hugo F. Martins; Juan Pastor-Graells; Sonia Martín-López; Pedro Corredera Guillén; Guy De Pauw; Filip De Smet; Willy Postvoll; Carl H. Ahlen; Miguel González-Herráez. Real Field Deployment of a Smart Fiber-Optic Surveillance System for Pipeline Integrity Threat Detection: Architectural Issues and Blind Field Test Results. Journal of Lightwave Technology. 36 - 4, pp. 1052 - 1062. OSA, 15/02/2018. Available on-line at: <<http://jlt.osa.org/abstract.cfm?URI=jlt-36-4-1052>>. ISSN 07338724

Type of production: Scientific paper**Format:** Journal**Position of signature:** 3**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Total no. authors:** 11**Corresponding author:** No**Impact source:** ISI**Category:** OPTICS - SCIE**Impact index in year of publication:** 4.162 (2018)**Journal in the top 25%:** Yes**Position of publication:** 13**No. of journals in the cat.:** 95**Source of citations:** Google Scholar**Citations:** 20

- 21** Andres Garcia-Ruiz; Alejandro Dominguez-Lopez; Juan Pastor-Graells; Hugo F. Martins; Sonia Martin-Lopez; Miguel Gonzalez-Herraez. Long-range distributed optical fiber hot-wire anemometer based on chirped-pulse Φ OTDR. Optics Express. 26 - 1, pp. 463 - 476. OSA, 08/01/2018. Available on-line at: <<http://www.opticsexpress.org/abstract.cfm?URI=oe-26-1-463>>. ISSN 10944087

Type of production: Scientific paper**Format:** Journal



Position of signature: 4

Total no. authors: 6

Impact source: ISI

Impact index in year of publication: 3.561 (2018)

Position of publication: 20

Source of citations: Google Scholar

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

Category: OPTICS - SCIE

Journal in the top 25%: Yes

No. of journals in the cat.: 95

Citations: 9

- 22** J. Pastor-Graells; J. Nuño; M.R. Fernández-Ruiz; A. Garcia-Ruiz; H.F. Martins; S. Martin-Lopez; M. Gonzalez-Herraez. Chirped-pulse Phase-sensitive Reflectometer Assisted by First Order Raman Amplification. *Journal of Lightwave Technology*. 35 - 21, pp. 4677 - 4683. Institute of Electrical and Electronics Engineers Inc., 01/11/2017. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85030786702&doi=10.1109%2fJLT.2017.2756558&partnerID=40&md5=741db4b1379ce2cbc70fbec58062f4ed>>. ISSN 07338724

Type of production: Scientific paper

Position of signature: 5

Total no. authors: 7

Impact source: ISI

Impact index in year of publication: 3.652 (2017)

Position of publication: 13

Source of citations: Google Scholar

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

Category: OPTICS - SCIE;

Journal in the top 25%: Yes

No. of journals in the cat.: 94

Citations: 18

- 23** J. Pastor-Graells; L.R. Cortés; M.R. Fernández-Ruiz; H.F. Martins; J. Azaña; S. Martin-Lopez; M. Gonzalez-Herraez. SNR enhancement in high-resolution phase-sensitive OTDR systems using chirped pulse amplification concepts. *Optics Letters*. 42 - 9, pp. 1728 - 1731. OSA - The Optical Society, 01/05/2017. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85018983118&doi=10.1364%2fOL.42.001728&partnerID=40&md5=95366b185700c134fc9ce79cdd13e512>>. ISSN 01469592

Type of production: Scientific paper

Position of signature: 4

Total no. authors: 7

Impact source: ISI

Impact index in year of publication: 3.589 (2017)

Position of publication: 14

Source of citations: Google Scholar

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

Category: OPTICS - SCIE

Journal in the top 25%: Yes

No. of journals in the cat.: 94

Citations: 14

- 24** J. Tejedor; J. Macias-Guarasa; H.F. Martins; D. Piote; J. Pastor-Graells; S. Martin-Lopez; P. Corredera; M. Gonzalez-Herraez. A novel fiber optic based surveillance system for prevention of pipeline integrity threats. *Sensors (Switzerland)*. 17 - 2, pp. 355. MDPI AG, 12/02/2017. Available on-line at: <<https://www.mdpi.com/1424-8220/17/2/355>>. ISSN 14248220

Type of production: Scientific paper

Position of signature: 3

Total no. authors: 8

Impact source: ISI

Impact index in year of publication: 2.475 (2017)

Position of publication: 16

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

Category: INSTRUMENTS & INSTRUMENTATION - SCIE;

Journal in the top 25%: No

No. of journals in the cat.: 61



Source of citations: Google Scholar

Citations: 28

- 25** A. Garcia-Ruiz; J. Pastor-Graells; H.F. Martins; K.H. Tow; L. Thévenaz; S. Martin-Lopez; M. Gonzalez-Herraez. Distributed photothermal spectroscopy in microstructured optical fibers: Towards high-resolution mapping of gas presence over long distances. *Optics Express*. 25 - 3, pp. 1789 - 1805. OSA - The Optical Society, 06/02/2017. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85011634548&doi=10.1364%2fOE.25.001789&partnerID=40&md5=17a687635c831d9dc146c48c67c472e9>>. ISSN 10944087

Type of production: Scientific paper

Position of signature: 3

Total no. authors: 7

Impact source: ISI

Impact index in year of publication: 3.356 (2017)

Position of publication: 19

Source of citations: Google Scholar

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

Category: OPTICS - SCIE

Journal in the top 25%: Yes

No. of journals in the cat.: 94

Citations: 17

- 26** M.R. Fernández-Ruiz; H.F. Martins; J. Pastor-Graells; S. Martin-Lopez; M. Gonzalez-Herraez. Phase-sensitive OTDR probe pulse shapes robust against modulation-instability fading. *Optics Letters*. 41 - 24, pp. 5756 - 5759. OSA - The Optical Society, 15/12/2016. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85009366157&doi=10.1364%2fOL.41.005756&partnerID=40&md5=ad87b9e1c2dc614450b3c1fe59a55c8c>>. ISSN 01469592

Type of production: Scientific paper

Position of signature: 2

Total no. authors: 5

Impact source: ISI

Impact index in year of publication: 3.416 (2016)

Position of publication: 15

Source of citations: Google Scholar

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

Category: OPTICS - SCIE;

Journal in the top 25%: Yes

No. of journals in the cat.: 92

Citations: 13

- 27** J. Tejedor; H.F. Martins; D. Piote; J. Macias-Guarasa; J. Pastor-Graells; S. Martin-Lopez; P.C. Guillén; F. De Smet; W. Postvoll; M. González-Herráez. Toward prevention of pipeline integrity threats using a smart fiber-optic surveillance system. *Journal of Lightwave Technology*. 34 - 19, pp. 4445 - 4453. Institute of Electrical and Electronics Engineers Inc., 01/10/2016. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84994895377&doi=10.1109%2fJLT.2016.2542981&partnerID=40&md5=61bfceaa36aaa4c71d2acfd8386d4f3a>>. ISSN 07338724

Type of production: Scientific paper

Position of signature: 2

Total no. authors: 10

Impact source: ISI

Impact index in year of publication: 3.671 (2016)

Position of publication: 13

Source of citations: Google Scholar

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

Category: OPTICS - SCIE;

Journal in the top 25%: Yes

No. of journals in the cat.: 92

Citations: 61

- 28** H.F. Martins; K. Shi; B.C. Thomsen; S. Martin-Lopez; M. Gonzalez-Herraez; S.J. Savory. Real time dynamic strain monitoring of optical links using the backreflection of live PSK data. *Optics Express*. 24 - 19, pp. 22303 - 22318. OSA - The Optical Society, 19/09/2016. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2->



s2.0-84990059029&doi=10.1364%2fOE.24.022303&partnerID=40&md5=164f10db8f41f3d6afea128f0b012efa>. ISSN 10944087

Type of production: Scientific paper
Position of signature: 1

Total no. authors: 5
Impact source: ISI
Impact index in year of publication: 3.307 (2016)
Position of publication: 17

Source of citations: Google Scholar

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: Yes

Category: OPTICS - SCIE;

Journal in the top 25%: Yes

No. of journals in the cat.: 92

Citations: 39

- 29** J. Pastor-Graells; H.F. Martins; A. Garcia-Ruiz; S. Martin-Lopez; M. Gonzalez-Herraez. Single-shot distributed temperature and strain tracking using direct detection phase-sensitive OTDR with chirped pulses. *Optics Express*. 24 - 12, pp. 13121 - 13133. OSA - The Optical Society, 13/06/2016. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84977665771&doi=10.1364%2fOE.24.013121&partnerID=40&md5=8046468f41855b20cb79cf21851b027d>>. ISSN 10944087

Type of production: Scientific paper
Position of signature: 2

Total no. authors: 5
Impact source: ISI
Impact index in year of publication: 3.307 (2016)
Position of publication: 17

Source of citations: Google Scholar

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

Category: OPTICS - SCIE;

Journal in the top 25%: Yes

No. of journals in the cat.: 92

Citations: 107

- 30** A. Garcia-Ruiz; J. Pastor-Graells; H.F. Martins; S. Martin-Lopez; M. Gonzalez-Herraez. Speckle Analysis Method for Distributed Detection of Temperature Gradients with Φ OTDR. *IEEE Photonics Technology Letters*. 28 - 18, pp. 2000 - 2003. Institute of Electrical and Electronics Engineers Inc., 07/06/2016. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84979868499&doi=10.1109%2fLPT.2016.2578043&partnerID=40&md5=c27e9ee2e1484a0aea30ed2fe8d1cd7a>>. ISSN 10411135

Type of production: Scientific paper
Position of signature: 3

Total no. authors: 5
Impact source: ISI
Impact index in year of publication: 2.375 (2016)
Position of publication: 32

Source of citations: Google Scholar

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

Category: OPTICS - SCIE;

Journal in the top 25%: No

No. of journals in the cat.: 92

Citations: 5

- 31** M.A. Soto; X. Lu; H.F. Martins; M. Gonzalez-Herraez; L. Thévenaz. Distributed phase birefringence measurements based on polarization correlation in phase-sensitive optical time-domain reflectometers. *Optics Express*. 23 - 19, pp. 24923 - 24936. OSA - The Optical Society, 21/09/2015. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84943636487&doi=10.1364%2fOE.23.024923&partnerID=40&md5=c085706055998888655cf48652bde5e2>>. ISSN 10944087

Type of production: Scientific paper
Position of signature: 3

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee



Total no. authors: 5
Impact source: ISI
Impact index in year of publication: 3.148 (2015)
Position of publication: 14
Source of citations: Google Scholar

Corresponding author: No
Category: OPTICS - SCIE;
Journal in the top 25%: Yes
No. of journals in the cat.: 90
Citations: 38

- 32** H.F. Martins; J. Pastor-Graells; L.R. Cortés; D. Piote; S. Martin-Lopez; J. Azaña; M. Gonzalez-Herraez. PROUD-based method for simple real-time in-line characterization of propagation-induced distortions in NRZ data signals. *Optics Letters*. 40 - 18, pp. 4356 - 4359. OSA - The Optical Society, 15/09/2015. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84959205515&doi=10.1364%2fOL.40.004356&partnerID=40&md5=f109d8dc15bc605bb2c68e89d20be147>>. ISSN 01469592

Type of production: Scientific paper
Position of signature: 1

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: Yes

Category: OPTICS - SCIE;

Journal in the top 25%: Yes

No. of journals in the cat.: 90

Citations: 3

Total no. authors: 7
Impact source: ISI
Impact index in year of publication: 3.040 (2015)
Position of publication: 15
Source of citations: Google Scholar

- 33** H.F. Martins; S. Martin-Lopez; P. Corredera; J.D. Ania-Castñon; O. Frazão; M. González-Herráez. Distributed vibration sensing over 125 km with enhanced SNR using Phi-OTDR over a URFL cavity. *Journal of Lightwave Technology*. 33 - 12, pp. 2628 - 2632. Institute of Electrical and Electronics Engineers Inc., 15/06/2015. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84933555954&doi=10.1109%2fJLT.2015.2396359&partnerID=40&md5=feaaafb0c46418df2aa46909006ed3660>>. ISSN 07338724

Type of production: Scientific paper
Position of signature: 1

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: Yes

Category: OPTICS - SCIE;

Journal in the top 25%: Yes

No. of journals in the cat.: 90

Citations: 52

Total no. authors: 6
Impact source: ISI
Impact index in year of publication: 2.567 (2015)
Position of publication: 20
Source of citations: Google Scholar

- 34** H.F. Martins; J. Bierlich; K. Wondraczek; S. Unger; J. Kobelke; K. Schuster; M.B. Marques; M. González-Herráez; O. Frazão. High-sensitivity dispersive Mach-Zehnder interferometer based on a dissimilar-doping dual-core fiber for sensing applications. *Optics Letters*. 39 - 9, pp. 2763 - 2766. Optical Society of America, 01/05/2014. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84899675337&doi=10.1364%2fOL.39.002763&partnerID=40&md5=bcc43076801d3afb781066e1a88ad45d>>. ISSN 01469592

Type of production: Scientific paper
Position of signature: 1

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: Yes

Category: OPTICS - SCIE;

Journal in the top 25%: Yes

No. of journals in the cat.: 87

Total no. authors: 9
Impact source: ISI
Impact index in year of publication: 3.292 (2014)
Position of publication: 11

Source of citations: Google Scholar

Citations: 4

- 35** H.F. Martins; S. Martín-López; P. Corredera; M.L. Filograno; O. Frazão; M. González-Herráez. Phase-sensitive optical time domain reflectometer assisted by first-order raman amplification for distributed vibration sensing over >100 km. *Journal of Lightwave Technology*. 32 - 8, pp. 1510 - 1518. Institute of Electrical and Electronics Engineers Inc., 15/04/2014. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84897096873&doi=10.1109%2fJLT.2014.2308354&partnerID=40&md5=44bc946a547ad9422fbec8b9f9cac3b6>>. ISSN 07338724

Type of production: Scientific paper

Position of signature: 1

Total no. authors: 6

Impact source: ISI

Impact index in year of publication: 2.965 (2014)

Position of publication: 12

Source of citations: Google Scholar

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: Yes

Category: OPTICS - SCIE;

Journal in the top 25%: Yes

No. of journals in the cat.: 87

Citations: 104

- 36** H.F. Martins; M.B. Marques; O. Frazão. Intensity vibration sensor based on Raman fiber laser using a distributed mirror combined with Bragg grating structures. *Applied Physics B: Lasers and Optics*. 114 - 4, pp. 455 - 459. Springer Verlag, 01/03/2014. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84899413172&doi=10.1007%2fs00340-014-5802-5&partnerID=40&md5=a4d41dc25e17c2bdb8bf0e0a6f932dec>>. ISSN 09462171

Type of production: Scientific paper

Position of signature: 1

Total no. authors: 3

Impact source: ISI

Impact index in year of publication: 1.856 (2014)

Position of publication: 32

Source of citations: Google Scholar

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: Yes

Category: OPTICS - SCIE;

Journal in the top 25%: No

No. of journals in the cat.: 87

Citations: 3

- 37** H.F. Martins; S. Martin-Lopez; P. Corredera; M.L. Filograno; O. Frazão; M. González-Herráez. Coherent noise reduction in high visibility phase-sensitive optical time domain reflectometer for distributed sensing of ultrasonic waves. *Journal of Lightwave Technology*. 31 - 23, pp. 3631 - 3637. 01/12/2013. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84888101317&doi=10.1109%2fJLT.2013.2286223&partnerID=40&md5=50182381fcc677a824dbfcde6c951085>>. ISSN 07338724

Type of production: Scientific paper

Position of signature: 1

Total no. authors: 6

Impact source: ISI

Impact index in year of publication: 2.862 (2013)

Position of publication: 16

Source of citations: Google Scholar

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: Yes

Category: OPTICS - SCIE;

Journal in the top 25%: Yes

No. of journals in the cat.: 83

Citations: 127

- 38** H.F. Martins; S. Martin-Lopez; P. Corredera; P. Salgado; O. Frazão; M. González-Herráez. Modulation instability-induced fading in phase-sensitive optical time-domain reflectometry. *Optics Letters*. 38 - 6, pp. 872 - 874. 15/03/2013. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2->

s2.0-84875168336&doi=10.1364%2fOL.38.000872&partnerID=40&md5=daf6a237946038cd48eb0fe072296ef8>. ISSN 01469592

Type of production: Scientific paper
Position of signature: 1

Total no. authors: 6

Impact source: ISI

Impact index in year of publication: 3.179 (2013)

Position of publication: 10

Source of citations: Google Scholar

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

Category: OPTICS - SCIE

Journal in the top 25%: Yes

No. of journals in the cat.: 83

Citations: 80

39

H. Martins; M.B. Marques; P. Jorge; C.M.B. Cordeiro; O. Frazão. Intensity curvature sensor based on photonic crystal fiber with three coupled cores. Optics Communications. 285 - 24, pp. 5128 - 5131. 01/11/2012. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84867576992&doi=10.1016%2fj.optcom.2012.07.074&partnerID=40&md5=b0b263d2c6d2adee1612967ff87b7050>> ISSN 00304018

Type of production: Scientific paper
Position of signature: 1

Total no. authors: 5

Impact source: ISI

Impact index in year of publication: 1.438 (2012)

Position of publication: 34

Source of citations: Google Scholar

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: Yes

Category: OPTICS - SCIE

Journal in the top 25%: No

No. of journals in the cat.: 80

Citations: 20

40

H. Martins; M.B. Marques; O. Frazão. 300 km-ultralong Raman fiber lasers using a distributed mirror for sensing applications. Optics Express. 19 - 19, pp. 18149 - 18154. Optical Society of American (OSA), 12/09/2011. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-80052717128&doi=10.1364%2fOE.19.018149&partnerID=40&md5=5a737df4c9f2eaaafacdd75dbe328d39a>>. ISSN 10944087

Type of production: Scientific paper
Position of signature: 1

Total no. authors: 3

Impact source: ISI

Impact index in year of publication: 3.587 (2011)

Position of publication: 6

Source of citations: Google Scholar

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

Category: OPTICS - SCIE

Journal in the top 25%: Yes

No. of journals in the cat.: 79

Citations: 35

41

H. Martins; M.B. Marques; O. Frazão. Comparison of brillouin-raman comb fiber laser in two different configurations. Laser Physics. 21 - 11, pp. 1925 - 1931. 02/09/2011. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84855868334&doi=10.1134%2fS1054660X11190248&partnerID=40&md5=eb079306781b8aa766566c0e125370>> ISSN 1054660X

Type of production: Scientific paper
Position of signature: 1

Total no. authors: 3

Impact source: ISI

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

Category: OPTICS - SCIE;

**Impact index in year of publication:** 3.605 (2011)**Position of publication:** 5**Source of citations:** Google Scholar**Journal in the top 25%:** Yes**No. of journals in the cat.:** 79**Citations:** 6**42**

H.F. Martins; M.B. Marques; O. Frazão. Temperature-insensitive strain sensor based on four-wave mixing using Raman fiber Bragg grating laser sensor with cooperative Rayleigh scattering. *Applied Physics B: Lasers and Optics*. 104 - 4, pp. 957 - 960. 01/09/2011. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-80053567329&doi=10.1007%2fs00340-011-4516-1&partnerID=40&md5=847a90a7d18a3de6e892e4f685a61025>>. ISSN 09462171

Type of production: Scientific paper**Position of signature:** 1**Total no. authors:** 3**Impact source:** ISI**Impact index in year of publication:** 2.189 (2011)**Position of publication:** 17**Source of citations:** Google Scholar**Format:** Journal**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Corresponding author:** No**Category:** OPTICS - SCIE;**Journal in the top 25%:** Yes**No. of journals in the cat.:** 79**Citations:** 30**43**

María Rosario Fernández-Ruiz; Luis Costa; Hugo F. Martins. Distributed Acoustic Sensing Using Chirped-Pulse Phase-Sensitive OTDR Technology. *Sensors (Switzerland)*. 19 - 20, pp. 4368. MDPI AG, 09/10/2019. Available on-line at: <<https://www.mdpi.com/1424-8220/19/20/4368>>. ISSN 14248220

Type of production: Review**Position of signature:** 3**Total no. authors:** 3**Impact source:** ISI**Impact index in year of publication:** 3.031 (2018)**Position of publication:** 15**Source of citations:** Google Scholar**Format:** Journal**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Corresponding author:** Yes**Category:** INSTRUMENTS & INSTRUMENTATION - SCIE;**Journal in the top 25%:** Yes**No. of journals in the cat.:** 61**Citations:** 0**44**

J. Ribeiro; D. Viveiros; J. Ferreira; A. Lopez-Gil; A. Dominguez-Lopez; H.F. Martins; R. Perez-Herrera; A. Lopez-Aldaba; L. Duarte; A. Pinto; S. Martin-Lopez; H. Baierl; R. Jamier; S. Rougier; J.-L. Auguste; A.C. Teodoro; J.A. Gonçalves; O. Esteban; J.L. Santos; P. Roy; M. Lopez-Amo; M. Gonzalez-Herraez; J.M. Baptista; D. Flores. ECOAL project-Delivering Solutions for Integrated monitoring of coal-related fires supported on optical fiber sensing technology. *Applied Sciences (Switzerland)*. 7 - 9, pp. 956. MDPI AG, 16/09/2017. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85029795026&doi=10.3390%2fapp7090956&partnerID=40&md5=47f26ebf35d3f0496677fa67da18111f>>. ISSN 20763417

Type of production: Review**Position of signature:** 6**Total no. authors:** 24**Impact source:** ISI**Impact index in year of publication:** 1.689 (2017)**Position of publication:** 77**Source of citations:** Google Scholar**Format:** Journal**Degree of contribution:** Author or co-author of review**Corresponding author:** No**Category:** PHYSICS, APPLIED - SCIE;**Journal in the top 25%:** No**No. of journals in the cat.:** 146**Citations:** 0

- 45** J. Tejedor; J. Macias-Guarasa; H.F. Martins; J. Pastor-Graells; P. Corredera; S. Martin-Lopez. Machine learning methods for pipeline surveillance systems based on distributed acoustic sensing: A review. Applied Sciences (Switzerland). 7 - 8, pp. 841. MDPI AG, 16/08/2017. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85027687768&doi=10.3390%2fapp7080841&partnerID=40&md5=58d7a571a75e1dbd8fcb4741b7f75009>>. ISSN 20763417
- Type of production:** Review
Position of signature: 3
Total no. authors: 6
Impact source: ISI
Impact index in year of publication: 1.689 (2017)
Position of publication: 77
Source of citations: Google Scholar
- Format:** Journal
Degree of contribution: Author or co-author of review
Corresponding author: No
Category: PHYSICS, APPLIED - SCIE;
Journal in the top 25%: No
No. of journals in the cat.: 146
Citations: 16
- 46** Ricardo M. Silva; Hugo Martins; Ivo Nascimento; José M. Baptista; António Lobo Ribeiro; José L. Santos; Pedro Jorge; Orlando Frazão. Optical Current Sensors for High Power Systems: A Review. Applied Sciences. 2 - 3, pp. 602 - 628. 02/07/2012. Available on-line at: <<http://www.mdpi.com/2076-3417/2/3/602>>. ISSN 2076-3417
- Type of production:** Review
Position of signature: 2
Total no. authors: 8
Impact source: ISI
Impact index in year of publication: 1.484 (2014)
Position of publication: 79
Source of citations: Google Scholar
- Format:** Journal
Degree of contribution: Author or co-author of review
Corresponding author: No
Category: PHYSICS, APPLIED - SCIE;
Journal in the top 25%: No
No. of journals in the cat.: 142
Citations: 99

Works submitted to national or international conferences

- 1** **Title of the work:** Underwater seismology using submarine dark fibres
Name of the conference: 2020 22nd International Conference on Transparent Optical Networks (ICTON)
City of event: Bari, Italy
Date of event: 19/07/2020
Organising entity: IEEE
Type of contribution: Scientific book or monograph
R. {Magalhães}; M. R. {Fernandez-Ruiz}; L. {Costa}; H. F. {Martins}; A. {Garcia-Ruiz}; S. {Martin-Lopez}; E. {Williams}; Z. {Zhan}; R. {Vantilho}; M. {Gonzalez-Herraez}. "2020 22nd International Conference on Transparent Optical Networks (ICTON)". pp. 1 - 4. 07/2020. ISSN 2161-2064
- 2** **Title of the work:** Boosting the spatial resolution in chirped pulse ϕ -OTDR using sub-band processing
Name of the conference: Seventh European Workshop on Optical Fibre Sensors, EWOFS 2019
City of event: Limassol, Cyprus
Date of event: 03/10/2019
Organising entity: SPIE
Leonardo Marcon; Marcelo A. Soto; Miguel Soriano-Amat; Luis Costa; Hugo F. Martins; Luca Palmieri; Miguel Gonzalez-Herraez. 11199, pp. 111991W.
- 3** **Title of the work:** Characterization and modelling of induced virtual perturbations in chirped pulse ϕ -OTDR
Name of the conference: Seventh European Workshop on Optical Fibre Sensors, EWOFS 2019
City of event: Limassol, Cyprus
Date of event: 03/10/2019

**Organising entity:** SPIE

Miguel Soriano-Amat; Leonardo Marcon; Luis Costa; Andres Garcia-Ruiz; Hugo F. Martins; Sonia Martin-Lopez; Luca Palmieri; Miguel Gonzalez-Herraez. 11199, pp. 111992A.

- 4** **Title of the work:** Distributed detection of quadratic Kerr effect in silica fibers using chirped-pulse ϕ OTDR
Name of the conference: Seventh European Workshop on Optical Fibre Sensors, EWOFS 2019
City of event: Limassol, Cyprus
Date of event: 03/10/2019
Organising entity: SPIE
Regina Magalhães; João Pereira; Andres Garcia-Ruiz; Walter Margulis; Sonia Martin-Lopez; Miguel Gonzalez-Herraez; Hugo F. Martins. 11199, pp. 1119929.
- 5** **Title of the work:** Hydrogen and deuterium distributed sensing using Chirped-Pulse ϕ OTDR
Name of the conference: Seventh European Workshop on Optical Fibre Sensors, EWOFS 2019
City of event: Limassol, Cyprus
Date of event: 03/10/2019
Organising entity: SPIE
A. Garcia-Ruiz; A. Morana; Hugo F. Martins; S. Martin-Lopez; M. Gonzalez-Herraez; S. Delepine-Lesoille; A. Boukenter; Y. Ouerdane; S. Girard. 11199, pp. 111993G.
- 6** **Title of the work:** Optimization of first-order phase-noise cancellation in CP- ϕ OTDR
Name of the conference: Seventh European Workshop on Optical Fibre Sensors, EWOFS 2019
City of event: Limassol, Cyprus
Date of event: 03/10/2019
Organising entity: SPIE
Luis Costa; Hugo F. Martins; S. Martin-Lopez; Maria R. Fernandez-Ruiz; M. Gonzalez-Herraez. 11199, pp. 111992D.
- 7** **Title of the work:** Spectrally-resolved distributed optical fibre bolometry
Name of the conference: Seventh European Workshop on Optical Fibre Sensors, EWOFS 2019
City of event: Limassol, Cyprus
Date of event: 03/10/2019
Organising entity: SPIE
Regina Magalhães; Andres Garcia-Ruiz; S. Martin-Lopez; M. Gonzalez-Herraez; Hugo F. Martins. 11199, pp. 111992I.
- 8** **Title of the work:** Teleseisms monitoring using chirped-pulse ϕ OTDR
Name of the conference: Seventh European Workshop on Optical Fibre Sensors, EWOFS 2019
City of event: Limassol, Cyprus
Date of event: 03/10/2019
Organising entity: SPIE
Maria R. Fernandez-Ruiz; Ethan L. Williams; Regina Magalhaes; Roel Vanthillo; Luis Costa; Zhongwen Zhan; S. Martin-Lopez; M. Gonzalez-Herraez; Hugo F. Martins. 11199, pp. 1119921.
- 9** **Title of the work:** High-fidelity distributed acoustic sensing using optical fibers: a new tool in Geophysics
Name of the conference: RIAO-OPTILAS-MOPM 2019
Type of participation: Participatory - invited/keynote talk
Corresponding author: Yes
City of event: Cancún, Mexico
Date of event: 24/09/2019
María R. Fernandez-Ruiz; Sonia Martins-Lopez; Miguel Gonzalez-Herraez; Hugo F. Martins.

- 10** **Title of the work:** Aplicación de la técnica ϕ OTDR de pulsos chirpados a la detección distribuida de hidrógeno y deuterio
Name of the conference: OPTOEL 2019 - XI Reunión Española de Optoelectrónica
City of event: Zaragoza, Spain
Date of event: 05/07/2019
Andres GARCIA-RUIZ; Adriana MORANA; Hugo F. MARTINS; Sonia MARTIN-LOPEZ; Miguel GONZALEZ-HERRAEZ; Sylvie DELEPINE-LESOILLE; Aziz BOUKENTER; Youcef OUERDANE; Sylvain GIRARD.
- 11** **Title of the work:** Caracterización de errores sistemáticos inducidos en sistemas ϕ OTDR de pulso chirpado
Name of the conference: OPTOEL 2019 - XI Reunión Española de Optoelectrónica
City of event: Zaragoza, Spain
Date of event: 05/07/2019
Miguel SORIANO-AMAT; Leonardo MARCON; Riccardo VERONESE; Andres GARCIA-RUIZ; Marco CALABRESE; Luis COSTA; Hugo F. MARTINS; Luca PALMIERI; Sonia MARTIN-LOPEZ; Miguel GONZALEZ-HERRAEZ.
- 12** **Title of the work:** Detección Distribuida de Radiación Solar usando Chirped-Pulse Phase-Sensitive OTDR
Name of the conference: OPTOEL 2019 - XI Reunión Española de Optoelectrónica
City of event: Zaragoza, Spain
Date of event: 05/07/2019
Regina MAGALHÃES; Andres GARCIA-RUIZ; João PEREIRA; Walter MARGULIS; Sonia MARTIN-LOPEZ; Miguel GONZALEZ-HERRAEZ; Hugo F. MARTINS.
- 13** **Title of the work:** Monitorización de actividad sísmica usando sensores distribuidos en fibra basados en ϕ OTDR y pulsos con chirp
Name of the conference: OPTOEL 2019 - XI Reunión Española de Optoelectrónica
City of event: Zaragoza, Spain
Date of event: 05/07/2019
María R. FERNÁNDEZ-RUIZ; Hugo F. MARTINS; Ethan F. WILLIAMS; Luis COSTA; Regina MAGALHÃES; Sonia MARTIN-LOPEZ; Zhongwen ZHAN; Miguel GONZALEZ-HERRAEZ.
- 14** **Title of the work:** Monitoring of remote seismic events in metropolitan area fibers using distributed acoustic sensing (DAS) and spatiotemporal signal processing
Name of the conference: Optical Fiber Communication Conference 2019
Corresponding author: Yes
City of event: San Diego, Switzerland
Date of event: 07/03/2019
Organising entity: IEEE
Type of contribution: Scientific book or monograph
Hugo F. Martins; María R. Fernández-Ruiz; Luis Costa; Ethan Williams; Zhongwen Zhan; Sonia Martin-Lopez; Miguel Gonzalez-Herraez. "Optical Fiber Communication Conference (OFC) 2019". En: Optical Fiber Communication Conference (OFC) 2019. pp. M2J.1 - M2J.1. Optical Society of America, 2019. Available on-line at: <<http://www.osapublishing.org/abstract.cfm?URI=OFC-2019-M2J.1>>.
- 15** **Title of the work:** A Gaussian Mixture Model-Hidden Markov Model (GMM-HMM)-based fiber optic surveillance system for pipeline integrity threat detection
Name of the conference: 26th International Conference on Optical Fiber Sensors, OFS 2018
City of event: Lausanne, Switzerland
Date of event: 28/09/2018



Organising entity: OSA

Type of contribution: Scientific book or monograph

J. Tejedor; J. Macias-Guarasa; H. F. Martins; S. Martin-Lopez; M. Gonzalez-Herraez. "26th International Conference on Optical Fiber Sensors". En: 26th International Conference on Optical Fiber Sensors. pp. WF36 - WF36. Optical Society of America, 2018. Available on-line at: <<http://www.osapublishing.org/abstract.cfm?URI=OFS-2018-WF36>>.

16 Title of the work: Distributed Detection of Optical Radiation using Chirped-Pulse Phase-Sensitive Optical Time Domain Reflectometry

Name of the conference: 26th International Conference on Optical Fiber Sensors, OFS 2018

City of event: Lausanne, Switzerland

Date of event: 28/09/2018

Organising entity: OSA

Type of contribution: Scientific book or monograph

Regina Magalhães; Andres Garcia-Ruiz; Hugo F. Martins; João Pereira; Walter Margulis; Sonia Martin-Lopez; Miguel González-Herráez. "26th International Conference on Optical Fiber Sensors". En: 26th International Conference on Optical Fiber Sensors. pp. ThE13 - ThE13. Optical Society of America, 2018. Available on-line at: <<http://www.osapublishing.org/abstract.cfm?URI=OFS-2018-ThE13>>.

17 Title of the work: Extending the Measurement of True Dynamic Strain via Chirped-Pulse Phase-Sensitive Optical Time Domain Reflectometry to 100's of Microstrains

Name of the conference: 26th International Conference on Optical Fiber Sensors, OFS 2018

City of event: Lausanne, Switzerland

Date of event: 28/09/2018

Organising entity: OSA

Type of contribution: Scientific book or monograph

Hari Datta Bhatta; Luis Costa; Andres Garcia-Ruiz; Maria R. Fernandez-Ruiz; Hugo F. Martins; Moshe Tur; Miguel Gonzalez-Herraez. "26th International Conference on Optical Fiber Sensors". En: 26th International Conference on Optical Fiber Sensors. pp. WF14 - WF14. Optical Society of America, 2018. Available on-line at: <<http://www.osapublishing.org/abstract.cfm?URI=OFS-2018-WF14>>.

18 Title of the work: Reaching $p\epsilon$ /Hz sensitivity in a distributed optical fiber strain sensor

Name of the conference: 26th International Conference on Optical Fiber Sensors, OFS 2018

City of event: Lausanne, Switzerland

Date of event: 28/09/2018

Organising entity: OSA

Type of contribution: Scientific book or monograph

Luis Costa; Hugo F. Martins; Sonia Martin-Lopez; María R. Fernández-Ruiz; Miguel Gonzalez-Herraez. "26th International Conference on Optical Fiber Sensors". En: 26th International Conference on Optical Fiber Sensors. pp. TuD3 - TuD3. Optical Society of America, 2018. Available on-line at: <<http://www.osapublishing.org/abstract.cfm?URI=OFS-2018-TuD3>>.

19 Title of the work: Statistical Analysis of SNR in Chirped-pulse Φ OTDR

Name of the conference: 26th International Conference on Optical Fiber Sensors, OFS 2018

City of event: Lausanne, Switzerland

Date of event: 28/09/2018

Organising entity: OSA

Type of contribution: Scientific book or monograph

María R. Fernández-Ruiz; Hugo F. Martins; Luis Costa; Sonia Martin-Lopez; Miguel Gonzalez-Herraez. "26th International Conference on Optical Fiber Sensors". En: 26th International Conference on Optical Fiber Sensors. pp. WF16 - WF16. Optical Society of America, 2018. Available on-line at: <<http://www.osapublishing.org/abstract.cfm?URI=OFS-2018-WF16>>.



- 20** **Title of the work:** Chirped-Pulse phase-sensitive OTDR
Name of the conference: 2018 Opto-Electronics and Communications Conference (OECC2018)
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
Corresponding author: Yes
City of event: ICC Jeju, Korea, Republic of Korea
Date of event: 05/07/2018
Organising entity: IEEE
Hugo F. Martins.
- 21** **Title of the work:** Transforming the Fiber-Optic Network into a Dense and Ultrasensitive Seismic Sensor Array
Name of the conference: 2018 20th International Conference on Transparent Optical Networks (ICTON)
City of event: Bucharest, Romania
Date of event: 05/07/2018
Organising entity: IEEE
Andres Garcia-Ruiz; Regina Magalhães; Luis Costa; Francisco J. Cobo; Hugo F. Martins; María R. Fernández-Ruiz; Sonia Martin-Lopez; Miguel Gonzalez-Herraez.
- 22** **Title of the work:** >10 dB SNR Enhancement in Distributed Acoustic Sensors through First Order Phase Noise Cancellation
Name of the conference: Optical Fiber Communication Conference 2018
City of event: San Diego, United States of America
Date of event: 18/03/2018
Organising entity: IEEE
Type of contribution: Scientific book or monograph
María R. Fernández-Ruiz; Juan Pastor-Graells; Hugo F. Martins; Andres Garcia-Ruiz; Sonia Martin-Lopez; Miguel Gonzalez-Herraez. "Optical Fiber Communication Conference". En: Optical Fiber Communication Conference. pp. W1K.2 - W1K.2. Optical Society of America, 2018. Available on-line at: <<http://www.osapublishing.org/abstract.cfm?URI=OFC-2018-W1K.2>>.
- 23** **Title of the work:** Long-range, Power-efficient Distributed Flow Measurements Using Chirped-pulse Phase-sensitive Reflectometry
Name of the conference: Optical Fiber Communication Conference 2018
City of event: San Diego, United States of America
Date of event: 15/03/2018
Organising entity: OSA
Type of contribution: Scientific book or monograph
Andres Garcia-Ruiz; Alejandro Dominguez-Lopez; Juan Pastor-Graells; Hugo F. Martins; Sonia Martin-Lopez; Miguel Gonzalez-Herraez. "Optical Fiber Communication Conference". En: Optical Fiber Communication Conference. pp. W1K.3 - W1K.3. Optical Society of America, 2018. Available on-line at: <<http://www.osapublishing.org/abstract.cfm?URI=OFC-2018-W1K.3>>.
- 24** **Title of the work:** Chirped-pulse phase-sensitive reflectometry
Name of the conference: OPTOEL 2017 - X Reunión Española de Optoelectrónica
City of event: Santiago de Compostela, Spain
Date of event: 12/07/2017
End date: 14/07/2017
Juan Pastor-Graells; Andres Garcia-Ruiz; Maria R. Fernández-Ruiz; Hugo Fidalgo Martins; Sonia Martín-López; Miguel González-Herráez.



- 25** **Title of the work:** Distributed gas detection along microstructured optical fibers through photothermal absorption
Name of the conference: OPTOEL 2017 - X Reunión Española de Optoelectrónica
City of event: Santiago de Compostela, Spain
Date of event: 12/07/2017
End date: 14/07/2017
Andres Garcia-Ruiz; Juan Pastor-Graells; Hugo Fidalgo Martins; Kenny Hey Tow; Luz Thévenaz; Sonia Martín-López; Miguel González-Herráez.
- 26** **Title of the work:** Mitigación de los efectos no lineales en OTDR mediante modulación de la envolvente del pulso de sonda
Name of the conference: OPTOEL 2017 - X Reunión Española de Optoelectrónica
City of event: Santiago de Compostela, Spain
Date of event: 12/07/2017
End date: 14/07/2017
Maria R. Fernández-Ruiz; Hugo Fidalgo Martins; Juan Pastor-Graells; Sonia Martín-López; Miguel González-Herráez.
- 27** **Title of the work:** OTDR sensible a la fase con resolución espacial milimétrica
Name of the conference: OPTOEL 2017 - X Reunión Española de Optoelectrónica
City of event: Santiago de Compostela, Spain
Date of event: 12/07/2017
End date: 14/07/2017
Juan Pastor-Graells; Luís Romero Cortés; María R. Fernández-Ruiz; Hugo Fidalgo Martins; José Azaña; Sonia Martín-López; Miguel González-Herráez.
- 28** **Title of the work:** Protecting fiber-optic links from third party intrusion using distributed acoustic sensors (Invited)
Name of the conference: 19th International Conference on Transparent Optical Networks, ICTON 2017
City of event: Girona, Catalonia, Spain
Date of event: 02/07/2017
End date: 06/07/2017
Organising entity: IEEE
María Rosario Fernández-Ruiz; Andres Garcia-Ruiz; Hugo Fidalgo Martins; Juan Pastor-Graells; Sonia Martín-López; Miguel González-Herráez.
- 29** **Title of the work:** 20 dB SNR enhancement in phase-sensitive OTDR using pulse stretching and recompression
Name of the conference: 25th International Conference on Optical Fiber Sensors, OFS 2017
City of event: Jeju, Republic of Korea
Date of event: 24/04/2017
End date: 28/04/2017
Organising entity: SPIE **Type of entity:** Associations and Groups
Juan Pastor-Graells; Luis Romero Cortés; Hugo Fidalgo Martins; María Rosario Fernández-Ruiz; José Azaña; Sonia Martín-López; Miguel González-Herráez.
- 30** **Title of the work:** Chirped-pulse phase-sensitive reflectometry: Hearing behind the walls with high fidelity
Name of the conference: 25th International Conference on Optical Fiber Sensors, OFS 2017
City of event: Jeju, Republic of Korea
Date of event: 24/04/2017
End date: 28/04/2017
Organising entity: SPIE **Type of entity:** Associations and Groups



Miguel González-Herráez; Juan Pastor-Graells; Andres Garcia-Ruiz; María Rosario Fernández-Ruiz; Hugo Fidalgo Martins; Sonia Martín-López.

- 31 Title of the work:** Code length limit in phase-sensitive OTDR using ultralong (>1M bits) pulse sequences due to fading induced by fiber optical path drifts
Name of the conference: 25th International Conference on Optical Fiber Sensors, OFS 2017
Corresponding author: Yes
City of event: Jeju, Republic of Korea
Date of event: 24/04/2017
End date: 28/04/2017
Organising entity: SPIE **Type of entity:** Associations and Groups
Hugo Fidalgo Martins; Kai Shi; Benn C. Thomsen; Seb J. Savory; Sonia Martín-López; Miguel González-Herráez.
- 32 Title of the work:** Distributed photothermal measurements of gas presence along holey optical fibers
Name of the conference: 25th International Conference on Optical Fiber Sensors, OFS 2017
City of event: Jeju, Republic of Korea
Date of event: 24/04/2017
End date: 28/04/2017
Organising entity: SPIE **Type of entity:** Associations and Groups
Andres Garcia-Ruiz; Juan Pastor-Graells; Hugo Fidalgo Martins; Kenny Hey Tow; Luc Thévenaz; Sonia Martín-López; Miguel González-Herráez.
- 33 Title of the work:** Impact of the laser phase noise on chirped-pulse phase-sensitive OTDR
Name of the conference: 25th International Conference on Optical Fiber Sensors, OFS 2017
City of event: Jeju, Republic of Korea
Date of event: 24/04/2017
End date: 28/04/2017
Organising entity: SPIE **Type of entity:** Associations and Groups
Juan Pastor-Graells; María Rosario Fernández-Ruiz; Hugo Fidalgo Martins; Andres Garcia-Ruiz; Sonia Martín-López; Miguel González-Herráez.
- 34 Title of the work:** Impact of the probe pulse shape on the performance of phase-sensitive optical time-domain reflectometry sensors
Name of the conference: 25th International Conference on Optical Fiber Sensors, OFS 2017
City of event: Jeju, Republic of Korea
Date of event: 24/04/2017
End date: 28/04/2017
Organising entity: SPIE **Type of entity:** Associations and Groups
María Rosario Fernández-Ruiz; Hugo Fidalgo Martins; Juan Pastor-Graells; Sonia Martín-López; Miguel González-Herráez.
- 35 Title of the work:** Towards detection of pipeline integrity threats using a smart fiber optic surveillance system: PIT-STOP project blind field test results
Name of the conference: 25th International Conference on Optical Fiber Sensors, OFS 2017
City of event: Jeju, Republic of Korea
Date of event: 24/04/2017
End date: 28/04/2017
Organising entity: SPIE **Type of entity:** Associations and Groups
Javier Tejedor; Javier Macías-Guarasa; Hugo Fidalgo Martins; Daniel Piote; Juan Pastor-Graells; Sonia Martín-López; Pedro Corredera Guillén; Guy De Pauw; Filip De Smet; Willy Postvoll; Carl Henrik Ahlen; Miguel González-Herráez.



- 36** **Title of the work:** Chirped-pulse phase-sensitive optical time-domain reflectometry
Name of the conference: 2016 Asia Communications and Photonics Conference, ACP 2016
City of event: Wuhan, China
Date of event: 02/11/2016
End date: 05/11/2016
Organising entity: OSA
Miguel González-Herráez; Andres Garcia-Ruiz; Pedro Corredera Guillén; Juan Pastor-Graells; María Rosario Fernández-Ruiz; Hugo Fidalgo Martins; Sonia Martín-López.
- 37** **Title of the work:** "Single-shot true distributed strain variation measurements over > 10 km using phase-sensitive OTDR with chirped pulses" BEST STUDENT PAPER AWARD
Name of the conference: Asia-Pacific Optical Sensors Conference, APOS 2016
City of event: Shanghai, China
Date of event: 11/10/2016
End date: 14/10/2016
Organising entity: OSA
Andres Garcia-Ruiz; Hugo Fidalgo Martins; Juan Pastor-Graells; Sonia Martín-López; Miguel González-Herráez.
- 38** **Title of the work:** Truly linear and dynamic distributed strain sensor using intensity-only measurements
Name of the conference: Optical Sensors, Sensors 2016
City of event: Vancouver, Canada
Date of event: 18/07/2016
End date: 20/07/2016
Organising entity: OSA
Juan Pastor-Graells; Hugo Fidalgo Martins; Andres Garcia-Ruiz; Sonia Martín-López; Miguel González-Herráez.
- 39** **Title of the work:** "Dynamic distributed measurement of temperature changes using phase-sensitive OTDR with chirped pulses" BEST POSTER AWARD
Name of the conference: 6th European Workshop on Optical Fibre Sensors
Corresponding author: Yes
City of event: Limerick, Ireland
Date of event: 31/05/2016
End date: 03/06/2016
Organising entity: SPIE
Juan Pastor-Graells; Hugo Fidalgo Martins; Andres Garcia-Ruiz; Sonia Martín-López; Miguel González-Herráez.
- 40** **Title of the work:** Distributed detection of temperature gradients with single-wavelength phase-sensitive OTDR and speckle analysis methods
Name of the conference: 6th European Workshop on Optical Fibre Sensors
City of event: Limerick, Ireland
Date of event: 31/05/2016
End date: 03/06/2016
Organising entity: SPIE
Andres Garcia-Ruiz; Juan Pastor-Graells; Hugo Fidalgo Martins; Sonia Martín-López; Miguel González-Herráez.



- 41** **Title of the work:** Early detection of pipeline integrity threats using a SmarT Fiber- Optic surveillance system: The PIT-STOP project
Name of the conference: 24th International Conference on Optical Fibre Sensors, OFS 2015
Corresponding author: Yes
City of event: Curitiba, Brazil
Date of event: 28/09/2015
End date: 02/10/2015
Organising entity: SPIE
Hugo Fidalgo Martins; Daniel Piote; Javier Tejedor; Javier Macías-Guarasa; Juan Pastor-Graells; Sonia Martín-López; Pedro Corredera Guillén; Filip De Smet; Willy Postvoll; Carl Henrik Ahlen; Miguel González-Herráez.
- 42** **Title of the work:** Aplicación de un sensor de fibra óptica en la detección temprana de amenazas en ductos: proyecto PIT-STOP
Name of the conference: OPTOEL 2015 - IX Reunión Española de Optoelectrónica
Corresponding author: Yes
City of event: Salamanca, Spain
Date of event: 13/07/2015
End date: 15/07/2015
Hugo Fidalgo Martins; Juan Pastor-Graells; Daniel Piote; Javier Tejedor; Javier Macias-Guarasa; Sonia Martín-López; Pedro Corredera Guillén; Philip De Smet; Willy Postvoll; Carl H. Ahlen; Miguel González-Herráez.
- 43** **Title of the work:** Estudio y caracterización de la dispersión cromática y SPM inducida en flujos de datos NRZ empleando técnicas PROUD
Name of the conference: OPTOEL 2015 - IX Reunión Española de Optoelectrónica
Corresponding author: Yes
City of event: Salamanca, Spain
Date of event: 13/07/2015
End date: 15/07/2015
Juan Pastor-Graells; Hugo Fidalgo Martins; Luís Romero Cortés; Daniel Piote; Sonia Martín-López; José Azaña; Miguel González-Herráez.
- 44** **Title of the work:** Monitoring of coal waste piles with fiber optic sensing technology
Name of the conference: 3rd Experiment International Conference, exp.at 2015
City of event: Sao Miguel Island Azores, Região Autónoma dos Açores, Portugal
Date of event: 02/06/2015
End date: 04/06/2015
Organising entity: IEEE
D. Viveiros; all et.
- 45** **Title of the work:** Long-range static and dynamic distributed sensing
Name of the conference: 13th IEEE SENSORS Conference, SENSORS 2014
City of event: Valencia, Spain
Date of event: 02/11/2014
End date: 05/11/2014
Organising entity: IEEE
Miguel González-Herráez; Alejandro Dominguez-Lopez; Alexia López-Gil; Hugo Fidalgo Martins; Sonia Martín-López; Xabier Angulo-Vinuesa; Pedro Corredera Guillén.



- 46** **Title of the work:** Distributed birefringence measurements using polarisation correlation in phase-sensitive OTDR
Name of the conference: 2014 European Conference on Optical Communication, ECOC 2014
Corresponding author: Yes
City of event: Cannes, France
Date of event: 21/09/2014
End date: 25/09/2014
Organising entity: IEEE
Hugo Fidalgo Martins; Xin Lu; Marcelo A. Soto; Miguel González-Herráez; Luc Thévenaz.
- 47** **Title of the work:** Distributed measurement of vibrations in a ramified fiber structure using phase sensitive optical time domain reflectometry and wavelength routing concepts
Name of the conference: Optical Sensors, 2014
City of event: Barcelona, Spain
Date of event: 27/07/2014
End date: 31/07/2014
Organising entity: OSA
Juan Pastor-Graells; Hugo Fidalgo Martins; Sonia Martín-López; Miguel González-Herráez.
- 48** **Title of the work:** Comparison of the use of first and second-order Raman amplification to assist a phase-sensitive optical time domain reflectometer in distributed vibration sensing over 125 km
Name of the conference: 23rd International Conference on Optical Fibre Sensors
Corresponding author: Yes
City of event: Santander, Spain
Date of event: 02/06/2014
End date: 06/06/2014
Organising entity: SPIE
Hugo Fidalgo Martins; Sonia Martín-López; Massimo Leonardo Filograno; Pedro Corredera Guillén; Orlando Frazão; Miguel González-Herráez.
- 49** **Title of the work:** Fiber optic sensing system for monitoring of coal waste piles in combustion
Name of the conference: 23rd International Conference on Optical Fibre Sensors
City of event: Santander, Spain
Date of event: 02/06/2014
End date: 06/06/2014
Organising entity: SPIE
D. Viveiros; all et.
- 50** **Title of the work:** In-line Mach-Zehnder interferometer based on a dissimilar-doping dual-core fiber for high sensitivity strain and temperature sensing
Name of the conference: 23rd International Conference on Optical Fibre Sensors
Corresponding author: Yes
City of event: Santander, Spain
Date of event: 02/06/2014
End date: 06/06/2014
Organising entity: SPIE
Hugo Fidalgo Martins; Jörg Bierlich; Katrin Wondraczek; Sonja Unger; Jens Kobelke; Kay Schüster; Manuel B. Marques; Miguel González-Herráez; Orlando Frazão.
- 51** **Title of the work:** Characterization of a phase-sensitive optical time domain reflectometer used for distributed sensing of vibrations and its performance limits due to modulation instability
Name of the conference: OPTOEL 2013 - VII Reunión Española de Optoelectrónica



Corresponding author: Yes
City of event: Alcalá de Henares, Spain
Date of event: 10/07/2013
End date: 12/07/2013

Hugo Fidalgo Martins; Sonia Martín-López; Pedro Corredera Guillén; Massimo Filograno; Orlando Frazao; Miguel González-Herráez.

52 Title of the work: High visibility phase-sensitive optical time domain reflectometer for distributed sensing of ultrasonic waves

Name of the conference: 5th European Workshop on Optical Fibre Sensors, EWOFS 2013

Corresponding author: Yes

City of event: Krakow, Poland

Date of event: 19/05/2013

End date: 22/05/2013

Organising entity: SPIE

Hugo Fidalgo Martins; Sonia Martín-López; Pedro Corredera Guillén; Massimo Leonardo Filograno; Orlando Frazão; Miguel González-Herráez.

53 Title of the work: Modulation instability-induced visibility fading in phase-sensitive OTDR

Name of the conference: 5th European Workshop on Optical Fibre Sensors, EWOFS 2013

Corresponding author: Yes

City of event: Krakow, Poland

Date of event: 19/05/2013

End date: 22/05/2013

Organising entity: SPIE

Hugo Fidalgo Martins; Sonia Martín-López; Pedro Corredera Guillén; Pedro Salgado; Orlando Frazão; Miguel González-Herráez.

54 Title of the work: Intensity curvature sensor based on photonic crystal fiber with three coupled cores

Name of the conference: Microstructured and Specialty Optical Fibres

Corresponding author: Yes

City of event: Brussels, Belgium

Date of event: 17/04/2012

End date: 19/04/2012

Organising entity: SPIE

Hugo Fidalgo Martins; Manuel B. Marques; Pedro Jorge; Cristiano M.B. Cordeiro; Orlando Frazão.

55 Title of the work: Comparison between two different configurations of Brillouin-Raman comb fiber laser

Name of the conference: OPTOEL 2011 - VII Reunión Española de Optoelectrónica

Corresponding author: Yes

City of event: Santander, Spain

Date of event: 29/05/2011

End date: 01/06/2011

Hugo Fidalgo Martins; Manuel B. Marques; Orlando Frazao.

56 Title of the work: Temperature-independent strain sensor based on four-wave mixing using Raman FBG laser sensor with cooperative Rayleigh scattering

Name of the conference: 21st International Conference on Optical Fiber Sensors

Corresponding author: Yes

City of event: Ottawa, Canada

Date of event: 15/05/2011



End date: 19/05/2011

Organising entity: SPIE

Hugo Fidalgo Martins; Manuel B. Marques; Orlando Frazão.

- 57** **Title of the work:** Brillouin Stokes comb generated in a distributed fiber Raman amplifier
Name of the conference: International Conference on Applications of Optics and Photonics
Corresponding author: Yes
City of event: Braga, Portugal
Date of event: 03/05/2011
End date: 07/05/2011
Organising entity: SPIE
Hugo Fidalgo Martins; Manuel B. Marques; Orlando Frazão.

Other dissemination activities

- 1** **Title of the work:** Dia Aberto da Faculdade de Ciencias do Porto (Open Science Day)
Type of event: Fairs and exhibitions
Date of event: 23/02/2012
Organising entity: Universidade do Porto **Type of entity:** University
City organizing entity: Porto, Portugal
- 2** **Title of the work:** Dia Aberto da Faculdade de Ciencias do Porto (Open Science Day)
Type of event: Fairs and exhibitions
Date of event: 11/03/2011
Organising entity: Universidade do Porto **Type of entity:** University
City organizing entity: Porto, Portugal
- 3** **Title of the work:** Dia Aberto da Faculdade de Ciencias do Porto (Open Science Day)
Type of event: Fairs and exhibitions
Date of event: 20/04/2007
Organising entity: Universidade do Porto **Type of entity:** University
City organizing entity: Porto, Portugal

R&D management and participation in scientific committees

Scientific, technical and/or assessment committees

Committee title: Member of Program Committee of 7th International Conference on Photonics, Optics and Laser Technology (Photoptics 2019)

Primary (UNESCO code): 220900 - Optics

City affiliation entity: Prague, Czech Republic

Start-End date: 25/02/2019 - 27/02/2019

Evaluation and revision of R&D projects and articles

Name of the activity: Peer Review

Performed tasks: Reviewer in >40 paper since 2013 in international research journals

Entity where activity was carried out: (Nature) Scientific Reports, (IEEE) Photonics Technology Letters, Journal of Lightwave technology, Photonics Journal, (OSA) Optics Express, Applied Optics, Optics Letters, (MDPI) Sensors, (Elsevier)

Type of activity: Review of articles in scientific or technological journals

Geographical area: Non EU International

Other achievements

Stays in public or private R&D centres

- 1 Entity:** California Institute of Technology (Caltech)
City of entity: California (Pasadena), United States of America
Start-End date: 08/08/2018 - 17/08/2018 **Duration:** 10 days
Goals of the stay: Guest
Provable tasks: Collaboration with Caltech for the use of distributed acoustic fibre sensing (DAS) in seismology applications. Assembly of a DAS setup to measure seismological vibrations in real time in pre-existing fibre installation in the City of Pasadena.
Relevant results: From the collaboration initiated with Caltech, several conference papers have been published, including a paper in Nature communications, regarding the use of DAS in seismology applications.
- 2 Entity:** Universidad de Alcalá **Type of entity:** University
City of entity: Alcalá de Henares, Community of Madrid, Spain
Start-End date: 01/02/2016 - 30/04/2016 **Duration:** 3 months
Funding entity: European commission
Name of programme: Within Marie Curie ITN grant "ICONE" (project ID 608099)
Goals of the stay: Post-doctoral
Provable tasks: Researching in advanced distributed optical sensing techniques based on phase-sensitive optical time domain analysis.
Relevant results: Colaboration between FOCUS and University of Alcalá resulted in several Patent of inventions, Scientific articles and Conference papers during Marie Curie project "ICONE".
- 3 Entity:** UCL (University College London) **Type of entity:** University
City of entity: London, United Kingdom
Start-End date: 15/10/2015 - 18/12/2015 **Duration:** 2 months
Funding entity: European commission
Name of programme: Within Marie Curie ITN grant "ICONE" (project ID 608099)
Goals of the stay: Post-doctoral
Provable tasks: During the stay of Dr. Hugo in UCL, the possibility of performing distributed sensing (using a phase-sensitive OTDR) in parallel with an operating optical communication channel was investigated. It was conceptually and practically demonstrated that distributed sensing is possible by using the transmitted data as interrogating pulses and by monitoring the backscattered signal (as in a regular phase-sensitive OTDR), as long as the transmitted data pattern is known. Strain measurements with a spatial resolution of the order of one bit (i.e., about 1cm resolution for 10Gbps data) were demonstrated, which represents



an improvement of more than two orders of magnitude compared to standard metric resolution of phase-sensitive OTDR sensors.

Relevant results: From the results directly derived: 1 Journal Article (OpEx - Real time dynamic strain monitoring of optical links using the backreflection of live PSK data), 1 Conference Paper (OFS 2017 - Code length limit in phase-sensitive OTDR using ultralong (>1M bits) pulse sequences due to fading induced by fiber optical path drifts /

- 4** **Entity:** Consejo Superior de Investigaciones Científicas (CSIC) **Type of entity:** R&D Centre
City of entity: Community of Madrid, Spain
Start-End date: 01/07/2015 - 31/08/2015 **Duration:** 2 months
Funding entity: European commission
Name of programme: Within Marie Curie ITN grant "ICONE" (project ID 608099)
Goals of the stay: Post-doctoral
Provable tasks: Researching in fibre Raman technologies in application to coherent distributed sensing.
Relevant results: Colaboration between FOCUS and CSIC resulted in 1 Scientific paper during Marie Curie project "ICONE" (JLT - Distributed vibration sensing over 125 km with enhanced SNR using Phi-OTDR over a URFL cavity).
- 5** **Entity:** EPFL - École Polytechnique Fédérale de Lausanne **Type of entity:** University
City of entity: Lausanne, Switzerland
Start-End date: 06/04/2014 - 18/04/2014 **Duration:** 13 days
Goals of the stay: Guest
Provable tasks: Research on distributed measurement of pressure using phi-OTDR and PMF
Relevant results: From the results directly derived: 1 Patent of invention (PCT/IB2014/064598), 1 Journal Article (OpEx - Distributed phase birefringence measurements based on polarization correlation in phase-sensitive optical time-domain reflectometers), 1 Conference Paper (ECOC 2014 - Distributed birefringence measurements using polarisation correlation in phase-sensitive OTDR)

Obtained grants and scholarships

- 1** **Name of the grant:** Marie Curie Postdoctoral Fellowship
Aims: Post-doctoral
Awarding entity: Within "ICONE - ALIIED INITIATIVE FOR TRAINING AND EDUCATION IN COHERENT OPTICAL NETWORKS. MARIE CURIE ACTIONS- INITIAL TRAINING NETWORKS (ITN)" (project ID 608099)
Conferral date: 01/10/2014 **Duration:** 2 years
End date: 30/09/2016
Entity where activity was carried out: Fiber Optics Consulting Services and Technologies S.L.
- 2** **Name of the grant:** PhD Research Grant (terminated when finishing PhD)
City awarding entity: Portugal
Aims: Pre-doctoral
Awarding entity: FCT - Fundação para a Ciência e a **Type of entity:** Foundation Tecnologia
Amount of the grant: 38.910 €
Conferral date: 01/01/2012 **Duration:** 2 years - 9 months
End date: 30/09/2014
Entity where activity was carried out: INESC Porto (now INESC-TEC)
Faculty, institute or centre: Non-profit research institution



- 3** **Name of the grant:** Short Term Scientific Mission
Aims: Short research stay in foreign (EU) R&D centre
Awarding entity: COST Action TD1001 **Type of entity:** EU-funded programme
Amount of the grant: 2.000 €
Conferral date: 06/04/2014 **Duration:** 13 days
End date: 18/04/2014
Entity where activity was carried out: EPFL - École Polytechnique Fédérale de Lausanne
Faculty, institute or centre: University
- 4** **Name of the grant:** Pre-doctoral Research Grant
City awarding entity: Brazil
Aims: Pre-doctoral
Awarding entity: FADESP **Type of entity:** Foundation
Amount of the grant: 6.705 €
Conferral date: 01/04/2011 **Duration:** 9 months
End date: 31/12/2011
Entity where activity was carried out: INESC-Porto (now INESC-TEC)
Faculty, institute or centre: Non-profit research institution

Prizes, mentions and distinctions

- 1** **Description:** Co-Author of paper receiving Best Poster award in national conference OPTOEL 2019
Awarding entity: Scientific Committee of Conference OPTOEL 2019
City awarding entity: Zaragoza, Spain
Conferral date: 05/07/2019
Recognition linked: Best poster award for the paper: "L. Costa, H. F. Martins, Sonia Martin-Lopez, M. R. Fernandez-Ruiz, M. Gonzalez-Herraez, "Sensor acústico distribuido en fibra óptica con una sensibilidad de 10-12 e $\sqrt{\text{Hz}}$," OPTOEL 2019, Zaragoza, Spain, 2019
- 2** **Description:** Co-Author of paper receiving Best Student paper award in 26th International Conference on Optical Fiber Sensors, OFS 2018
Awarding entity: Scientific Committee of 26th International Conference on Optical Fiber Sensors, OFS 2018
City awarding entity: Lausanne, Switzerland
Conferral date: 28/09/2018
Recognition linked: Best student paper award for the paper: "L. Costa, H. F. Martins, S. Martin-Lopez, M. R. Fernández-Ruiz, and M. Gonzalez-Herraez, "Reaching p $\epsilon/\sqrt{\text{Hz}}$ sensitivity in a distributed optical fiber strain sensor," in 26th International Conference on Optical Fiber Sensors, OSA Technical Digest (Optical Society of America, 2018), paper TuD3."
- 3** **Description:** Premio Extraordinario de Doctorado
Awarding entity: Universidad de Alcalá **Type of entity:** University
City awarding entity: Alcalá de Henares, Community of Madrid, Spain
Conferral date: 04/04/2017
- 4** **Description:** Co-Author of paper receiving Best Student paper award in international conference APOS 2016
Awarding entity: (SCIENTIFIC COMMITTEE OF ASIA-PACIFIC OPTICAL SENSORS CONFERENCE)
City awarding entity: Shanghai, China
Conferral date: 14/10/2016



Recognition linked: Best student paper award for the paper: "A. Garcia-Ruiz, H. F. Martins, J. Pastor-Graells, S. Martin-Lopez, and M. Gonzalez-Herraez, "Single-Shot True Distributed Strain Variation Measurements Over >10 km Using Phase-Sensitive OTDR with Chirped Pulses," in Asia Pacific Optical Sensors Conference, OSA Technial Digest (online) (Optical Society of America, 2016), paper Th3A.2."

5 Description: BEST POSTER OF THE SESION EWOFs 2016

Awarding entity: (SCIENTIFIC COMMITTEE OF EUROPEAN WORKSHOP OF OPTICAL FIBER SENSORS)

City awarding entity: Limerick, Ireland

Conferral date: 03/06/2016

Recognition linked: Best poster award in "Distributed Sensing, Multiplexing, and Sensor Networking" for the paper entitled "Dynamic distributed measurement of temperature changes using phase-sensitive OTDR with chirped pulses" on the SPIE conference "EWOFs 2016 – 6th European Workshop on Optical Fibre Sensors"

6 Description: Prémio Tese de Doutoramento 2015

Awarding entity: "Sociedade Portuguesa de Óptica e Fotónica" (Portuguese Society of Optics and Photonics) **Type of entity:** Associations and Groups

Conferral date: 30/05/2016

Recognition linked: Awarded the best PhD Thesis in Optics and Photonics of 2014/2015 in Portugal // <http://www.optica.pt/index.php/noticias/69-resultados-3-premio-sociedade-portuguesa-optica-fotonica-2>

7 Description: Accésit en el Premio a la Mejor Patente Nacional de la UAH

Awarding entity: Universidad de Alcalá

City awarding entity: Alcalá de Henares, Spain

Conferral date: 2016

Recognition linked: Premio a la patente "Distributed characterization system and method of variations of the refractive index of an optical fiber"