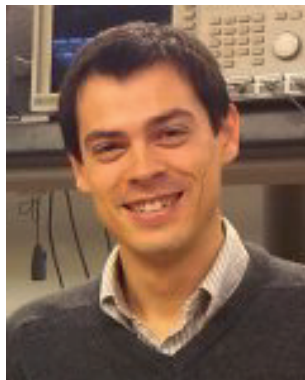


# Europass Curriculum Vitae



## Personal information

Surname(s) / First name(s)

Address(es)

Telephone(s)

Email(s)

Nationality(-ies)

Date of birth

Gender

**Pessoa, Luís Manuel de Sousa**

Rua Manuel de Arriaga, 210, Terceiro Esq. Trs., 4440-004 - Valongo, Portugal

+351222094016

lpessoa@inescporto.pt

Portuguese

May 2, 1983

Male

## Work experience

Dates

Occupation or position held

Main activities and responsibilities

Name of employer

Type of business or sector

June 2012 to present date

Senior researcher

Responsible for the conception and management of R&D projects, coordination of research students and fostering the valorization of research results through new contracts with industry.

Inesc Porto

Research Laboratory

Dates

Occupation or position held

Main activities and responsibilities

Name of employer

Type of business or sector

July 2012 to December 2013

Researcher in project WiSat, involving the portuguese SME Sinuta

Coordination and collaboration in the development, characterization and testing of a feed and coaxial-to-waveguide adapter for a 5 GHz Wi-Fi parabolic antenna

Inesc Porto

Research Laboratory

Dates

Occupation or position held

Main activities and responsibilities

Name of employer

Type of business or sector

September 2009 to February 2013

Researcher for european commission project FP7: DAPHNE

Investigation of technology associated with the transmission of signals in future air-plane optical fiber networks. Worked in the study of OFDM signals for plastic optical fibers, Radio-over-Fiber and in the deployment of laboratory experiments.

Inesc Porto

Research Laboratory

Dates

Occupation or position held

December 2010 to August 2011

Researcher for a portuguese science and technology (FCT) funded project: Wowi

Main activities and responsibilities	Investigation of uplink and downlink transmission options for future radio-over-fiber access points using low complexity nonlinear resonant tunneling diodes (RTD) with integrated laser diode and photodetector
Name of employer	Inesc Porto
Type of business or sector	Research Laboratory
Dates	September 2008 to January 2009; September 2009 to January 2010
Occupation or position held	Invited teaching assistant
Main activities and responsibilities	Responsible for teaching the laboratory classes of "Microwave and RF Engineering" module
Name of employer	Faculdade de Engenharia da Universidade do Porto
Type of business or sector	Faculty of Engineering
Dates	February 2006 to July 2006
Occupation or position held	Research Internship
Main activities and responsibilities	Work on the engineering final year project on the subject of optical communications. Developed a Labview routine, associated USB controller and a high-voltage amplifier for a piezoelectric device.
Name of employer	Inesc Porto
Type of business or sector	Research Laboratory
Dates	March 2006 to June 2006
Occupation or position held	Invited teaching assistant
Main activities and responsibilities	Responsible for assessing the students work from "Theory of Circuits" module
Name of employer	Faculdade de Engenharia da Universidade do Porto
Type of business or sector	Faculty of Engineering

## Education and training

Dates	October 2006 to July 2011
Title of qualification awarded	Doctor of Philosophy in Electrical and Computer Engineering
Thesis title	"Compensation of fibre impairments in coherent optical systems"
Principal subjects/Occupational skills covered	Digital signal processing, mathematics, statistics, optical communications: laser phase noise, compensation of linear and nonlinear fiber degrading effects, for single channel, multi-channel and polarization multiplexed signals, using both QPSK and OFDM modulations.
Name and type of organization providing education and training	Faculdade de Engenharia da Universidade do Porto
Funding	Phd funded by a grant from Fundação para a Ciência e Tecnologia
Level	Approved with distinction
Dates	September 2001 to July 2006
Title of qualification awarded	Electrical and Computer Engineer
Principal subjects/Occupational skills covered	Specializing in telecommunications, electronics and computers
Name and type of organization providing education and training	Faculdade de Engenharia da Universidade do Porto
Level	Overall average mark of 18 out of 20
Dates	September 2005 to January 2006
Title of qualification awarded	Erasmus Exchange Student
Principal subjects/Occupational skills covered	The programme of study covered three principal areas: E-business and E-commerce, Artificial Intelligence and Control and Stress
Name and type of organization providing education and training	The University of Hull - Department of computer science - Hull - HU6-7RX, United Kingdom
Level	Overall average mark of 75 out of 100 - grade A

Dates  
 Title of qualification awarded  
 Principal subjects/Occupational skills covered  
 Name and type of organization providing education and training  
 Level

## Personal skills and competences

Mother tongue(s)  
 Other language(s)  
*Self-assessment*  
*European level<sup>(\*)</sup>*

**English**

**Spanish**

**French**

Social skills and competences

Organizational skills and competences

September 1998 to July 2001

Secondary School

Scientific / General Course

Escola Secundária de Marco de Canaveses

Overall average mark of 19 out of 20

## Portuguese

English, Spanish, French

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C2	Proficient user	C2	Proficient user	C1	Proficient user	C1	Proficient user	C2	Proficient user
B1	Independent user	B2	Independent user	A2	Basic user	A2	Basic user	A2	Basic user
B1	Independent user	B2	Independent user	A2	Basic user	A2	Basic user	A2	Basic user

<sup>(\*)</sup> Common European Framework of Reference (CEF) level

- Member of the volleyball team of University College London (UCL) between September 2007 and January 2008

- Member of the volleyball team of HUU (Hull University Union) between September and December 2005

- Entrepreneurship, dynamism and initiative: Participated as a member in one of the teams in competition in the "Junior Achievement Graduate Program" in University of Porto, and progressed up to the national final level. Participated in the execution of a business plan, strategy and market analysis, presentations, and contacted with high representatives of multi-national companies, banks and venture capitals.

## Technical skills and competences

- Good knowledge about windows operating system
- Deep knowledge about linux operating system
- Good knowledge about Microsoft Word, Excel, Powerpoint, Access and Frontpage applications
- Basic knowledge of Web programming using ASP.NET, Microsoft Visual Studio and SQL Server
- Basic knowledge of network administration using Microsoft Exchange Server, Systems Management Server (SMS) and Microsoft Operations Manager (MOM)
- Great knowledge and experience using Simulink, Matlab and LabView
- Great experience programming C, C++, Prolog, JAVA, PHP, HTML, LATEX
- Good knowledge of computer networks (TCP/IP)
- Good experience building graphical applications using QT Designer
- Long experience using electronics tools such as: Electronics Workbench, Multisim, Microwind, HSpice, Orcad
- Deep knowledge over microcontroller systems, including 80C51 and PIC from Microchip, using C programming, as well as assembly programming for x86 and 80C51
- Good knowledge over digital signal processing systems (DSP TMS320C31, Assembly)
- Great ease of learning new programming languages
- Good knowledge about telecommunication systems, Radio Frequency design and good experience using Advanced Design System (ADS) application from Agilent
- Great knowledge about antennas, radiation patterns and signal propagation, and experience simulating antennas with NEC2 software
- Great experience manipulating laboratory equipment for both optical and electrical domains, such as signal generator, communications analyzer, vectorial network analyzer, as well as optical fibers, connectors and RF cabling

## Driving licence(s)

A1 Category (Motorcycle)  
B Category (Car)

## Additional information

From 1998 to 2006 won eight consecutive times a merit scholarship from "Fundação Calouste Gulbenkian"

### MsC Supervising experience

**February 2008-July 2009** Co-Supervised the MSc Thesis: "Implementação de algoritmos em FPGA para estimação de canal em sistemas óticos coerentes", Student: Nuno Moura Pinto, Integrated Master in Electrical and Computer Engineering, Faculdade de Engenharia da Universidade do Porto.

**February 2012-July 2012** Co-Supervised the MSc Thesis: "Ultra-Wide-Band sobre fibra ótica", Student: Nuno Franclim Sousa, Integrated Master in Electrical and Computer Engineering, Faculdade de Engenharia da Universidade do Porto.

**February 2012-July 2012** Co-Supervised the MSc Thesis: "Interfaces Eletro-Óticas para Redes de Acesso Pico-Celulares", Student: Manuel Guimarães Monteiro, Integrated Master in Electrical and Computer Engineering, Faculdade de Engenharia da Universidade do Porto.

### Publications

D. S. Fernandes, L. M. Pessoa, and H. M. Salgado.  
Tuneable optical filter based on a Fibre Bragg Grating with USB interface.  
In *Digest of SEON 2006 - IV Symposium on Enabling Optical Networks and Sensors*, pages 53–54, jun 2006

D. S. Fernandes, L. M. Pessoa, and H. M. Salgado.  
Computer controlled tuneable optical filter based on a fibre bragg grating.  
In *Conferencia Nacional de Fisica - Fisica*, September 4–7, 2006

- L. M. Pessoa, H. M. Salgado, and I. Darwazeh.  
Adaptive electrical equalization of optical impairments in coherent optical systems.  
In *Proc. Digest of the Symposium on Enabling Optical Networks and Sensors*, June 28, 2007
- L. M. Pessoa, H. M. Salgado, and I. Darwazeh.  
Algorithms for DSP implementation in coherent optical systems.  
In *Proc. CMC 2008 - Cranfield Multi-Strand Conference: Creating Wealth Through Research and Innovation*, May 5–6 2008
- L. M. Pessoa, H. M. Salgado, and I. Darwazeh.  
Joint mitigation of optical impairments and phase estimation in coherent optical systems.  
In *Proc. Digest of the IEEE/LEOS Summer Topical Meetings*, pages 169–170, July 21–23, 2008
- N. M. Pinto, L. M. Pessoa, and H. M. Salgado.  
FPGA Implementation of Signal Processing Algorithms in Coherent Optical Systems.  
In *Proc. Digest of the Symposium on Enabling Optical Networks and Sensors*, 2009
- L. M. Pessoa, H. M. Salgado, and I. Darwazeh.  
Simplified backpropagation equalization in WDM coherent polarization multiplexed systems.  
In *Proc. 11th International Conference on Transparent Optical Networks ICTON '09*, pages 1–5, June 2009
- L. M. Pessoa, H. M. Salgado, and I. Darwazeh.  
Assessment of parallel equalizer/phase estimation algorithms in coherent optical systems.  
In *Proc. IEEE/LEOS Summer Topical Meeting LEOSST '09*, pages 79–80, July 20–22, 2009
- L. M. Pessoa, H. M. Salgado, and I. Darwazeh.  
Performance evaluation of phase estimation algorithms in equalized coherent optical systems.  
*IEEE Photonics Technology Letters*, 17:1181–1183, 2009
- N. M. Pinto, H. M. Salgado, Ferreira J. C., and L. M. Pessoa.  
Implementação de Algoritmos em FPGA para Estimação de Sinal em Sistemas Ópticos Coerentes.  
In *Proc. Digest of REC 2010*, pages 33–39, 2010
- J. M. B. Oliveira, L. M. Pessoa, H. M. Salgado, and I. Darwazeh.  
Signal processing techniques for transmission impairments compensation in optical systems.  
In *Proc. 12th International Conference on Transparent Optical Networks (ICTON) 2010*, pages 1–4, jun. 2010
- J. M. B. Oliveira, S. Silva, L. M. Pessoa, D. Coelho, H. M. Salgado, and J. C. S. Castro.  
UWB Radio over Perfluorinated GI-POF for Low-Cost In-Building Networks.  
In *Proc. Digest of MWP 2010*, 2010
- J. M. B. Oliveira, S. Silva, L. M. Pessoa, H. M. Salgado, and J. C. S. Castro.  
Performance Evaluation of MB-OFDM UWB over GI-POF.  
In *Proc. Digest of NOC OCI 2010*, 2010
- S. Silva, L. M. Pessoa, J. M. B. Oliveira, D. Coelho, J. C. S. Castro, and H. M. Salgado.  
Performance evaluation of zero-biased VCSEL for high speed data transmission.  
*Journal of Instrumentation*, 5:C11012, 2010

- L. M. Pessoa, D. Coelho, J. M. B. Oliveira, J. C. S. Castro, and H. M. Salgado. Assessment of noise impact on UWB signals in R-EAM based optical links. In *Avionics, Fiber-Optics and Photonics Technology Conference (AVFOP), 2011 IEEE*, pages 59–60. IEEE, 2011
- L. M. Pessoa, D. Coelho, J. M. B. Oliveira, J. C. S. Castro, and H. M. Salgado. Experimental Evaluation of R-EAM Performance in RoF Networks. In *Proc. International Symposium on Green Radio over Fibre & All Optical Technologies for Wireless Access Networks - GROWAN 2011*, 2011
- B. Romeira, L. M. Pessoa, H. M. Salgado, S. Silva, and J. M. L. Figueiredo. Clock recovery of an injection-locked resonant tunneling diode microwave-photonics oscillator. In *Transparent Optical Networks (ICTON), 2011 13th International Conference on*, pages 1–4. IEEE, 2011
- D. Coelho, L. M. Pessoa, J. M. B. Oliveira, H. M. Salgado, and J. C. S. Castro. Performance Analysis of WDM-PON Architecture for Wireless Services Distribution in Aircraft Networks. In *Proceedings of CETEC 2011*, 2011
- D. Coelho, J. M. B. Oliveira, L. M. Pessoa, H. M. Salgado, and J. C. S. Castro. Performance Analysis of WDM-PON Architecture for UWB Distribution in Aircraft Networks. In *Proc. IX Symposium on Enabling Optical Networks and Sensors - SEONs 2011*, 2011
- L. M. Pessoa, J. M. B. Oliveira, D. Coelho, J. C. S. Castro, and H. M. Salgado. Experimental assessment of WLAN performance supported in a fiber-radio network. In *Proc. Future Network & Mobile Summit - FNMS 2012*, 2012
- D. Coelho, J. M. B. Oliveira, L. M. Pessoa, J. C. S. Castro, and H. M. Salgado. Experimental and theoretical performance assessment of WiFi-over-fiber using low cost directly modulated VCSELs. In *Transparent Optical Networks (ICTON), 2012 14th International Conference on*, pages 1–4. IEEE, 2012
- João M. B. Oliveira, Luís M. Pessoa, Diogo Coelho, Henrique M. Salgado, and Jorge C. S. Castro. *Performance Assessment of UWB-Over-Fiber and Applications*, chapter 15. InTech, 2012
- L. M. Pessoa, J. M. B. Oliveira, D. Coelho, J. C. S. Castro, H. M. Salgado, and M. Farries. Transmission of differential GPS signals over fiber for aircraft attitude determination. In *Avionics, Fiber-Optics and Photonics Technology Conference (AVFOP), 2012 IEEE*, pages 80–81. IEEE, 2012
- L. M. Pessoa, J. M. B. Oliveira, D. V. Coelho, J. C. S. Castro, and H. M. Salgado. Experimental evaluation of a R-EAM and noise impact analysis for UWB and Wi-Fi transmission in RoF networks. *Annals of Telecommunications*, 68(1-2):63–72, 2013
- L. M. Pessoa, H. M. Salgado, and I. Darwazeh. Assessment of dispersion map impact on the digital back propagation of long-haul fibre-optic links. *Optical and Quantum Electronics*, 45(3):257–269, 2013

- L. M. Pessoa, H. M. Salgado, and I. Darwazeh.  
Simplified back-propagation for fibre nonlinearity compensation employing multi-band OFDM signals.  
*Optical and Quantum Electronics*, 45(6):491–502, 2013
- L. M. Pessoa, M. C. Monteiro, M. R. Pereira, H. M. Salgado, B. Romeira, and J. M. L. Figueiredo.  
Experimental evaluation of optimum modulation formats for pico-cellular access networks based on resonant tunneling diodes.  
In *Transparent Optical Networks (ICTON)*, 2013 15th International Conference on, pages 1–4. IEEE, 2013