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Academic Qualifications

University/Institution	Type	Degree	Period
ISCTE-IUL - Instituto Superior Ciências Trabalho e da Empresa	PhD	Ciências e Tecnologias da Informação	2008
Instituto Superior Técnico - UTL	M.Sc.	Engenharia Electrotécnica e de Computadores	1998
Instituto Superior Técnico - UTL	Licenciante	Engenharia Electrotécnica e de Computadores	1993

Teaching Activities

Teaching Year	Sem.	Course Name	Degree(s)	Coord
2024/2025	2°	Fundamentals of Computer Networks	Bachelor Degree in Computer Science and Business Management (PL); Bachelor Degree in Computer Engineering (PL); Bachelor Degree in Computer Engineering; Bachelor Degree in Computer Science and Business Management; Bachelor Degree in Telecommunications and Computer Engineering;	Yes
2024/2025	1°	Optical Networks	Master Degree in Telecommunications and Computer Engineering;	Yes
2023/2024	2°	Fundamentals of Computer Networks	Bachelor Degree in Computer Science and Business Management (PL); Bachelor Degree in Computer Engineering (PL); Bachelor Degree in Computer Engineering; Bachelor Degree in Computer Science and Business Management; Bachelor Degree in Telecommunications and Computer Engineering;	Yes
2023/2024	1°	Optical Networks	Master Degree in Telecommunications and Computer Engineering;	Yes
2022/2023	2°	Fundamentals of Computer Networks	Bachelor Degree in Computer Science and Business Management (PL); Bachelor Degree in Computer Engineering (PL); Bachelor Degree in Computer Engineering; Bachelor Degree in Computer Science and Business Management; Bachelor Degree in Telecommunications and Computer Engineering;	Yes
2022/2023	1°	Optical Networks	Master Degree in Telecommunications and Computer Engineering;	Yes
2021/2022	2°	Fundamentals of Computer Networks	Bachelor Degree in Computer Science and Business Management (PL); Bachelor Degree in Computer Engineering (PL); Bachelor Degree in Computer Engineering; Bachelor Degree in Computer Science and Business Management; Bachelor Degree in Telecommunications and Computer Engineering;	Yes
2021/2022	1°	Optical Networks	Master Degree in Telecommunications and Computer Engineering;	Yes
2020/2021	2°	Fundamentals of Computer Networks	Bachelor Degree in Computer Science and Business Management (PL); Bachelor Degree in Computer Engineering (PL); Bachelor Degree in Computer Engineering; Bachelor Degree in Computer Science and Business Management; Bachelor Degree in Telecommunications and Computer Engineering;	Yes
2020/2021	1°	Optical Networks	Master Degree in Telecommunications and Computer Engineering;	Yes

2019/2020	2°	Optical Networks	Master Degree in Telecommunications and Computer Engineering;	Yes
2019/2020	2°	Digital Networks I - Fundamentals	Bachelor Degree in Telecommunications and Computer Engineering (PL);	No
2019/2020	1°	Fundamentals of Computer Architecture	Bachelor Degree in Computer Science and Business Management (PL); Bachelor Degree in Computer Engineering (PL); Bachelor Degree in Computer Engineering; Bachelor Degree in Telecommunications and Computer Engineering (PL); Bachelor Degree in Computer Science and Business Management; Bachelor Degree in Telecommunications and Computer Engineering;	No

Supervisions

• M.Sc. Dissertations

- Concluded

	Student Name	Title/Topic	Language	Institution	Concluding Year
1	João Frederico de Almeida Raposo do Ó Ramos	ROADM architectures for multi-band optical networks	English	ISCTE-IUL	2023
2	Margarida Isabel Carreto Vaz	Exploring ILP and heuristic formulations for planning multiband optical networks	English	ISCTE-IUL	2022
3	Marco Quiteres da Silva	Impact of physical layer impairments on SDM networks based on ROADM nodes	English	ISCTE-IUL	2021
4	Pedro Afonso Fernandes Fonseca	Graph coloring techniques for planning dynamic optical networks	English	ISCTE-IUL	2021
5	Filipa Ferreira Gomes	Impact of physical layer impairments on multi-band metro networks	English	ISCTE-IUL	2021
6	Inês Ferreira Gomes	Exploring optimal solutions for planning optical networks with graph coloring techniques.	English	ISCTE-IUL	2021
7	Pedro Daniel Santo Venda	Gaussian noise model for multiband optical networks over the C and L bands	English	ISCTE-IUL	2021
8	Inês Maria Leandro Duarte	Exploring Graph Coloring Heuristics for Optical Networks Planning	English	ISCTE-IUL	2020
9	Diogo Miguel Cigarro Morão	Impact of physical layer impairments on large ROADM architectures	English	ISCTE-IUL	2020
10	Paulo José da Costa Marinho Pereira	Superchannel transmission over flexible-grid optical networks	English	ISCTE-IUL	2019

11	Carlos Jorge da Cruz Rodrigues	Optical Network Planning for Static Applications	English	ISCTE-IUL	2018
12	Diogo Gonalo Sequeira	Impact of In-Band Crosstalk in an Optical Network Based on Multi-Degree CDC ROADMs	English	ISCTE-IUL	2017
13	H3lio Ferreira Paulo Sime3o	On the performance of M-QAM optical signals in ROADM based Optical Networks	English	ISCTE-IUL	2016
14	Bruno Rafael Pereira Pinheiro	Impact of in-band Crosstalk on the performance of PDM-QPSK Optical Communication Systems	English	ISCTE-IUL	2015
15	Gen3dio Jo3o Faria Martins	Estudo do Impacto do Crosstalk em Sistemas de Comunica3o Optica DPSK com detec3o directa atrav3s de uma simula3o de monte carlo	Portuguese	ISCTE-IUL	2012

• M.Sc. Final Projects

- Concluded

	Student Name	Title/Topic	Language	Institution	Concluding Year
1	Rui Pedro Miranda Batalha	JA(G)OBS SIMULATOR: IMPLEMENTATION OF THE MAIN FEATURES OF THE ROUTING PROTOCOL	English	UPC, Spain	2011
2	Jo3o Pedro Nunes Caldeira Bai3o	GMPLS-controlled OBS Network Simulator: Implementation of the signaling protocol	English	UPC, Spain	2010

Total Citations

Web of Science®	48
Scopus	94

Publications

• Scientific Journals

- Scientific journal paper

1	Ramos, J. F. 3., Cancela, L. & Rebola, J. (2024). Impact of the reconfigurable optical add-drop multiplexer architecture on the design of multi-band C+L+S optical networks. Optical Fiber Technology. 85
2	Venda, P., Rebola, J. & Cancela, L. (2022). Assessing the quality of transmission of lightpaths in multiband C+L networks through Gaussian noise models. Optical Fiber Technology. 74

3	<p>Sequeira, D. G., Cancela, L. & Rebola, J. (2021). CDC ROADM design tradeoffs due to physical layer impairments in optical networks. <i>Optical Fiber Technology</i>. 62</p> <ul style="list-style-type: none"> - Times Cited Web of Science®: 2 - Times Cited Scopus: 6 - Times Cited Google Scholar: 8
4	<p>Cancela, L. & Pires, J. (2020). Applying the skew-normal distribution to model coherent MPI and to evaluate its impact on PAM signals . <i>Optical Fiber Technology</i>. 56</p> <ul style="list-style-type: none"> - Times Cited Web of Science®: 1 - Times Cited Scopus: 1 - Times Cited Google Scholar: 4
5	<p>Chentsho, P., Cancela, L. & Pires, J. (2020). A framework for analyzing in-band crosstalk accumulation in ROADM-based optical networks. <i>Optical Fiber Technology</i>. 57</p> <ul style="list-style-type: none"> - Times Cited Scopus: 2 - Times Cited Google Scholar: 4
6	<p>Cancela, L. G. C., Rebola, J. L. & Pires, J. J. O. (2016). Implications of in-band crosstalk on DQPSK Signals in ROADM-based metropolitan optical networks. <i>Optical Switching and Networking</i>. 19, 135-144</p> <ul style="list-style-type: none"> - Times Cited Web of Science®: 1 - Times Cited Scopus: 2 - Times Cited Google Scholar: 3
7	<p>Cancela, L. & Pires, J. (2013). On the behaviour of eigenfunctions and eigenvectors in the performance analysis of optical direct detection DPSK receivers with optical amplification. <i>Journal of Optical Communications</i>. 34 (3), 145-154</p>
8	<p>Cancela, L. & Pires, J. (2012). Crosstalk tolerance of direct detection differential phase-shift keying optical systems in the presence of receiver imperfections. <i>IET Optoelectronics</i>. 6 (2), 94-101</p> <ul style="list-style-type: none"> - Times Cited Web of Science®: 4 - Times Cited Scopus: 3 - Times Cited Google Scholar: 5
9	<p>Pires, J. & Cancela, L. (2010). Theoretical Insights into the Impact of Coherent and Incoherent Crosstalk on Optical DPSK Signals. <i>Journal of Lightwave Technology</i>. 28 (19), 2766-2774</p> <ul style="list-style-type: none"> - Times Cited Web of Science®: 6 - Times Cited Scopus: 7 - Times Cited Google Scholar: 8
10	<p>Pires, J. & Cancela, L. (2010). Estimating the Performance of Direct-Detection DPSK in Optical Networking Environments Using Eigenfunction Expansion Techniques. <i>Journal of Lightwave Technology</i>. 28 (13), 1994-2003</p> <ul style="list-style-type: none"> - Times Cited Web of Science®: 13 - Times Cited Scopus: 15 - Times Cited Google Scholar: 18
11	<p>Pires, J. J. O. & Cancela, L. G. C. (2009). A contribution to study the effect of multipath coherent crosstalk due to optical network nodes on DPSK signals. <i>IEEE Photonics Technology Letters</i>. 21 (20), 1499-1501</p> <ul style="list-style-type: none"> - Times Cited Web of Science®: 2 - Times Cited Scopus: 2 - Times Cited Google Scholar: 2
12	<p>Pires, J. J. O. & Cancela, L. G. C. (2009). Simplifying the error probability analysis in optical direct detection DPSK systems. <i>IEEE Communications Letters</i>. 13 (6), 369-371</p> <ul style="list-style-type: none"> - Times Cited Web of Science®: 5 - Times Cited Scopus: 7 - Times Cited Google Scholar: 6

13	<p>Pires, J. J. O. & Cancela, L. G. C. (2007). On the probability density function of an optical DPSK signal in the presence of intrachannel crosstalk and ASE noise. <i>Journal of Optical Communications</i>. 28 (3), 229-233</p> <p>- Times Cited Web of Science®: 1</p> <p>- Times Cited Scopus: 1</p> <p>- Times Cited Google Scholar: 1</p>
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• Books and Book Chapters

- Book chapter

1	<p>Rebola, J., Cancela, L. & Pires, J. (2016). DQPSK Optical Networks Impaired by Multi Line Rates and Mixed Modulation Formats Interferers. In Paulo A. Ribeiro, Maria Raposo (Ed.), <i>Photoptics 2014</i>. (pp. 19-30). Cham, Suíça: Springer International Publishing.</p>
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• Conferences/Workshops and Talks

- Publication in conference proceedings

1	<p>Vaz, M., Cancela, L. & Rebola, J. (2023). Impact of network physical topology on planning multiband optical networks aware of physical layer impairments. In Stanciu, G. (Ed.), <i>2023 23rd International Conference on Transparent Optical Networks (ICTON)</i>. Bucharest, Romania: IEEE.</p>
2	<p>Ramos, J. F. Ó., Cancela, L. & Rebola, J. (2023). Influence of the ROADM architecture on the cost-per-bit in C+L+S multi-band optical networks. In Stanciu, G. (Ed.), <i>2023 23rd International Conference on Transparent Optical Networks (ICTON)</i>. Bucharest, Romania: IEEE.</p> <p>- Times Cited Scopus: 2</p> <p>- Times Cited Google Scholar: 3</p>
3	<p>Gomes, F., Cancela, L. G. & Rebola, J. L. (2022). Impact of physical layer impairments on C+L-band metro networks. In de Ceglia, D., Raposo, M., Albella, P., & Ribeiro, P. (Ed.), <i>Proceedings of the 10th International Conference on Photonics, Optics and Laser Technology (PHOTOPTICS 2022)</i>. (pp. 134-143). Online: SCITEPRESS – Science and Technology Publications, Lda.</p> <p>- Times Cited Scopus: 1</p> <p>- Times Cited Google Scholar: 1</p>
4	<p>Gomes, I., Cancela, L. & Rebola, J. (2022). Exploring the tabu search algorithm as a graph coloring technique for wavelength assignment in optical networks. In de Ceglia, D., Raposo, M., Albella, P., & Ribeiro, P. (Ed.), <i>Proceedings of the 10th International Conference on Photonics, Optics and Laser Technology (PHOTOPTICS 2022)</i>. (pp. 59-68). Online: SCITEPRESS – Science and Technology Publications, Lda.</p> <p>- Times Cited Scopus: 1</p> <p>- Times Cited Google Scholar: 1</p>
5	<p>Venda, P., Rebola, J. & Cancela, L. (2022). Impact of traffic load and spectral occupancy on Gaussian noise models performance for multiband networks. In <i>2022 13th International Symposium on Communication Systems, Networks and Digital Signal Processing (CSNDSP)</i>. (pp. 240-245). Porto: IEEE.</p> <p>- Times Cited Scopus: 1</p> <p>- Times Cited Google Scholar: 2</p>
6	<p>Silva, M. Q., Cancela, L. G. & Rebola, J. L. (2022). Cost, power consumption and performance analysis in SDM ROADM architectures for uncoupled spatial channels. In <i>2022 13th International Symposium on Communication Systems, Networks and Digital Signal Processing (CSNDSP)</i>. (pp. 857-862). Porto: IEEE.</p>

7	Fonseca, P., Cancela, L. & Rebola, J. (2022). Performance analysis of a graph coloring algorithm for wavelength assignment in dynamic optical networks. In 2022 13th International Symposium on Communication Systems, Networks and Digital Signal Processing (CSNDSP). (pp. 534-539). Porto: IEEE. - Times Cited Google Scholar: 1
8	Duarte, I., Cancela, L. & Rebola, J. (2021). Graph coloring heuristics for optical networks planning. In 2021 Telecoms Conference (ConfTELE). Leiria: IEEE. - Times Cited Scopus: 3 - Times Cited Google Scholar: 6
9	Morão, D. C., Cancela, L. G. & Rebola, J. L. (2021). Exploring future large-scale ROADMs architectures. In 2021 Telecoms Conference (ConfTELE). Leiria: IEEE. - Times Cited Scopus: 4 - Times Cited Google Scholar: 5
10	Pereira, P. J., Rebola, J. L. & Cancela, L. G. (2020). Procedure to optimize the intercarrier spacing in superchannels impaired by the cascading of WSS-based ROADMs. In Michinel, H., Costa. M. F., and Frazão, O. (Ed.), EPJ Web of Conferences. Porto: EDP Sciences.
11	Diogo G. Sequeira, Cancela, L. & Rebola, J. (2018). Physical layer impairments in cascaded multi-degree CDC ROADMs with NRZ and nyquist pulse shaped signals. In ICETE 2018 - Proceedings of the 15th International Joint Conference on e-Business and Telecommunications. (pp. 223-231). Porto - Times Cited Scopus: 1 - Times Cited Google Scholar: 1
12	Cancela, L. G. & Pires, J. O. (2018). How to statistically model coherent MPI in optical communications?. In Signal Processing in Photonic Communications, SPPCom 2018. Zurich: OSA - The Optical Society. - Times Cited Google Scholar: 1
13	Sequeira, D. G., Cancela, L. G. & Rebola, J. L. (2018). Impact of physical layer impairments on multi-degree CDC ROADM-based optical networks. In 22nd Conference on Optical Network Design and Modelling, ONDM 2018. (pp. 94-99). Dublin: IEEE. - Times Cited Web of Science®: 10 - Times Cited Scopus: 13 - Times Cited Google Scholar: 20
14	Pires, J. & Cancela, L. (2017). Investigating the impact of coherent multipath interference on optical QPSK systems. In Debbah M., Gesbert D., Mellouk A. (Ed.), IEEE International Conference on Communications. Paris: IEEE. - Times Cited Scopus: 1 - Times Cited Google Scholar: 1
15	Cancela, L. G., Sequeira, D. G., Pinheiro, B. R., Rebola, J. L. & Pires, J. (2016). Analytical tools for evaluating the impact of in-band crosstalk in DP-QPSK signals. In 2016 21st European Conference on Networks and Optical Communications (NOC). (pp. 6-11). Lisboa: IEEE. - Times Cited Google Scholar: 7
16	B. Pinheiro, Rebola, J. & Cancela, L. (2015). Assessing the Impact of In-Band Crosstalk on the Performance of M-QAM Coherent Receivers using the Error Vector Magnitude. In Conftele 2015 - 10th Conference on Telecommunications. Aveiro - Times Cited Google Scholar: 1

17	<p>B. Pinheiro, Rebola, J. & Cancela, L. (2015). Impact of In-Band Crosstalk Signals with Different Duty-Cycles in M-QAM Optical Coherent Receivers. In European Conference on Network and Optical Communications (NOC 2015). (pp. ---). Londres</p> <p>- Times Cited Scopus: 6</p> <p>- Times Cited Google Scholar: 7</p>
18	<p>Rebola, J., Cancela, L. & Pires, J. (2014). Impact of Multi-Rate and Multi-Format Crosstalk Signals on the Performance of 40 Gbit/s DQPSK Optical Receivers. In International Conference on Photonics, Optics and Laser Technology (Photoptics 2014). (pp. 56-62).</p> <p>- Times Cited Google Scholar: 2</p>
19	<p>Cancela, L., Rebola, J. & Pires, J. (2014). DQPSK Error Performance in the Presence of In-Band Interferers with Different Modulation Formats. In European Conference on Network and Optical Communications (NOC 2014). (pp. ---).</p> <p>- Times Cited Scopus: 1</p> <p>- Times Cited Google Scholar: 2</p>
20	<p>Cancela, L., Rebola, J. & Pires, J. (2013). Analytical Assessment of the Impact of OOK Crosstalk Signals on a DPSK Direct Detection System. In 9th Telecommunication Conference (ConfTele 2013). (pp. 0-0). Castelo Branco</p>
21	<p>Cancela, L. G. C., Rebola, J. L. & Pires, J. J. O. (2012). In-band crosstalk tolerance of direct detection DQPSK optical systems. In IEEE Photonics Conference 2012. (pp. 862-863). Burlingame, CA, USA : IEEE.</p> <p>- Times Cited Google Scholar: 7</p>
22	<p>Rebola, J. L., Cancela, L. G. C. & Pires, J. J. O. (2012). Assessment of the performance of DPSK optical direct detection receivers impaired by in-band crosstalk: Analytical formulation validation. In 2012 17th European Conference on Networks and Optical Communications. Vilanova i la Geltru, Spain: IEEE.</p>
23	<p>Martins, G., Cancela, L. & Rebola, J. (2012). Monte Carlo Simulation of an Optical Differential Phase-Shift Keying Communication System with Direct Detection Impaired by In-Band Crosstalk. In Fourth International Conference on Advances in System Simulation - SIMUL 2012. (pp. 0-0). Lisboa</p> <p>- Times Cited Google Scholar: 1</p>
24	<p>Cancela, L. G. C. & Pires, J. J. O. (2011). Quantifying the influence of crosstalk-crosstalk beat noise in optical DPSK systems. In Freire, J. C., and Pedro, J. C. (Ed.), 2011 IEEE EUROCON - International Conference on Computer as a Tool. Lisboa: IEEE.</p> <p>- Times Cited Google Scholar: 2</p>
25	<p>Cancela, L. & Pires, J. (2008). Complementary Approaches to Accurately Evaluate the Performance in Direct Detection DPSK Receivers. In IEEE Globecom 2008. (pp. 0-0). Nova Orleães</p>
26	<p>Cancela, L., Monteiro, P. & Pires, J. (2007). An Approach for Calculating the Performance of DPSK Direct Detection Systems with Semiconductor Optical Amplifiers. In 6th Telecommunication Conference (ConfTele 2007). (pp. 0-0).</p>
27	<p>Cancela, L. & Pires, J. (2007). On the Accuracy of the Gaussian Approximation for Performance Estimation in Optical DPSK Systems with In-Band Crosstalk. In IEEE International Conference on Communications (ICC 2007). (pp. 0-0). Glasgow</p> <p>- Times Cited Web of Science®: 3</p> <p>- Times Cited Google Scholar: 5</p>
28	<p>Cancela, L. & Pires, J. (2005). Numerical Study on the Tolerance to Intrachannel Crosstalk of Direct-Detection DPSK Optical Systems. In European Conference on Optical Communication (ECOC'05). (pp. 0-0). Glasgow</p> <p>- Times Cited Google Scholar: 3</p>

29	Cancela, L. & Pires, J. (2005). Application of the Saddle Point Method for the Evaluation of the Probability Density Function of Pre-Amplified OOK Systems in the Presence of Intrachannel Crosstalk. In Advanced Industrial Conference on Telecommunications (AICT 2005). (pp. 0-0). - Times Cited Google Scholar: 1
30	Cancela, L. & Pires, J. (2005). Impact of Intrachannel Crosstalk on the Performance of Direct-Detection DPSK Optical Systems. In Conference on Lasers and Electro-Optics Quantum Electronics & Laser Science (CLEO/QELS'05). (pp. 0-0). Baltimore - Times Cited Google Scholar: 9
31	Cancela, L. & Pires, J. (2003). Crosstalk Effects in Large Strictly Non-Blocking Optical Switches Based on Directional Couplers. In Proc. IEEE International Conference on High Speed Networks and Multimedia Communications (HSNMC'03).
32	Cancela, L. & Pires, J. (2001). Rigorous Evaluation of Crosstalk Requirements for Large Optical Space Switches Based on Directional Couplers. In Proc. 3rd Telecommunication Conference (ConfTele 2001). - Times Cited Google Scholar: 4
33	Cancela, L. & Pires, J. (2001). Homodyne Crosstalk Penalty in Large Strictly Non-Blocking Optical Switches Based on Directional Couplers. In Proc. Conference Asia-Pacific Optical and Wireless Communications APOC'01. (pp. 230-239). Beijing, China
34	Cancela, L. & Pires, J. (1999). Rigorous Analysis of the Impact of Multi-Source Crosstalk in a NxN Benes Optical Switch. In Proc. 2nd Telecommunication Conference (ConfTele 1999).
35	Cancela, L. & Pires, J. (1999). Influence of channel frequency spacing in multisource crosstalk in a Benes optical switch. In International Conference on Transparent Optical Networks . (pp. 107-110). Kielce, Poland: IEEE.
36	Cancela, L. & Pires, J. (1998). Multisource Crosstalk as a Function of Channel Frequency Spacing in an 8x8 Benes Optical Switch. In Proc. SPIE Conference on All-Optical Networking: Architecture, Control, and Management Issues. Boston - Times Cited Google Scholar: 1
37	Cancela, L. & Pires, J. (1998). Coherent Multipath Crosstalk due to Crossovers in an Active Splitter / Active Combiner Optical Switch. In Proc. IEEE Conference on Lasers and Electro-Optics-Europe 1998. (pp. 191-191).
38	Pires, J. & Cancela, L. (1997). Coherent Multipath Crosstalk in Benes and Dilated Benes Optical Switches. In Proc. IEEE Laser Electro-Optics Society 1997 Annual Meeting. (pp. 544-545). São Francisco - Times Cited Scopus: 2 - Times Cited Google Scholar: 4
39	Cancela, L. & Pires, J. (1997). Factores Limitativos no Projecto de Computadores Ópticos Espaciais. In Acta da I Conferência Nacional de Telecomunicações (ConfTele 1997). (pp. 285-288). Aveiro

- Talk

1	Vaz, M., Cancela, L. & Rebola, J. (2023). Impact of Network Physical Topology on Planning Multiband Optical Networks Aware of Physical Layer Impairments. ICTON - International Conference on Transparent Optical Networks.
2	Ramos, J., Cancela, L. & Rebola, J. (2023). Influence of the ROADM architecture on the cost-per-bit in C+L+S multi-band optical networks. ICTON - International Conference on Transparent Optical Networks.

3	Gomes, F., Cancela, L. & Rebola, J. (2022). Impact of Physical Layer Impairments on C+L-band Metro Networks. 10th International Conference on Photonics, Optics and Laser Technology (PHOTOPTICS 2022).
4	Gomes, I., Cancela, L. & Rebola, J. (2022). Exploring the Tabu Search Algorithm as a Graph Coloring Technique for Wavelength Assignment in Optical Networks. 10th International Conference on Photonics, Optics and Laser Technology (PHOTOPTICS 2022).
5	Silva, M., Cancela, L. & Rebola, J. (2022). Cost, power consumption and performance analysis in SDM ROADM architectures for uncoupled spatial channels. 2022 13th International Symposium on Communication Systems, Networks and Digital Signal Processing (CSNDSP) .
6	Fonseca, P., Cancela, L. & Rebola, J. (2022). Performance analysis of a graph coloring algorithm for wavelength assignment in dynamic optical networks. 2022 13th International Symposium on Communication Systems, Networks and Digital Signal Processing (CSNDSP) .
7	Venda, P., Rebola, J. & Cancela, L. (2022). Impact of traffic load and spectral occupancy on Gaussian noise models performance for multiband networks. 2022 13th International Symposium on Communication Systems, Networks and Digital Signal Processing (CSNDSP) .
8	Morão, D., Cancela, L. & Rebola, J. (2021). Exploring future large-scale ROADM architectures. Conftele 2021.
9	Duarte, I., Cancela, L. & Rebola, J. (2021). Graph Coloring Heuristics for Optical Networks Planning. Conftele 2021.
10	Paulo J. Pereira, Rebola, J. & Cancela, L. (2020). Procedure to optimize the intercarrier spacing in superchannels impaired by the cascading of WSS-based ROADMs. Procedure to optimize the intercarrier spacing in superchannels impaired by the cascading of WSS-based ROADMs.
11	Diogo Sequeira, Cancela, L. & Rebola, J. (2018). Physical Layer Impairments in Cascaded Multi-Degree CDC ROADMs with NRZ and Nyquist Pulse Shaped Signals. Optics 2018. - Times Cited Google Scholar: 1
12	Cancela, L. & Pires, J. (2018). How to Statistically Model Coherent MPI in Optical Communications?. OSA Advanced Photonics Congress.
13	Diogo Sequeira, Cancela, L. & Rebola, J. (2018). Impact of Physical Layer Impairments on Multi-Degree CDC ROADM-based Optical Networks. ONDM 2018 - 22nd Conference on Optical Network Design and Modelling.
14	Pires, J. & Cancela, L. (2017). Investigating the Impact of Coherent Multipath Interference on Optical QPSK Systems. IEEE International Conference on Communications (ICC 2017).
15	Cancela, L. & Rebola, J. (2016). Analytical Tools for Evaluating the Impact of In-Band Crosstalk in DP-QPSK Signals. 21st European Conference on Networks and Optical Communications - NOC 2016. - Times Cited Scopus: 5
16	B. Pinheiro, Rebola, J. & Cancela, L. (2015). Impact of In-Band Crosstalk Signals with Different Duty-Cycles in M-QAM Optical Coherent Receivers. European Conference on Network and Optical Communications (NOC 2015). ---
17	B. Pinheiro, Rebola, J. & Cancela, L. (2015). Assessing the Impact of In-Band Crosstalk on the Performance of M-QAM Coherent Receivers using the Error Vector Magnitude. Conftele 2015 - 10th Conference on Telecommunications.

18	Rebola, J., Cancela, L. & Pires, J. (2014). Impact of Multi-Rate and Multi-Format Crosstalk Signals on the Performance of 40 Gbit/s DQPSK Optical Receivers. International Conference on Photonics, Optics and Laser Technology (Photoptics 2014). 56-62
19	Cancela, L., Rebola, J. & Pires, J. (2014). DQPSK Error Performance in the Presence of In-Band Interferers with Different Modulation Formats. European Conference on Network and Optical Communications (NOC 2014). -- -
20	Cancela, L., Rebola, J. & Pires, J. (2013). Analytical Assessment of the Impact of OOK Crosstalk Signals on a DPSK Direct Detection System. 9th Telecommunication Conference (ConfTele 2013).
21	Rebola, J., Cancela, L. & Pires, J. (2012). Assessment of the performance of DPSK optical direct detection receivers impaired by in-band crosstalk analytical formulation validation. 17th European Conference on Networks and Optical Communications, NOC 2012.
22	Cancela, L., Rebola, J. & Pires, J. (2012). In-Band Crosstalk Tolerance of Direct Detection DQPSK Optical Systems. IEEE Photonics Conference 2012 - IPC 2012. - Times Cited Scopus: 6
23	Martins, G., Cancela, L. & Rebola, J. (2012). Monte Carlo Simulation of an Optical Differential Phase-Shift Keying Communication System with Direct Detection Impaired by In-Band Crosstalk. Fourth International Conference on Advances in System Simulation .
24	Cancela, L. & Pires, J. (2011). Quantifying the Influence of Crosstalk-Crosstalk Beat Noise in Optical DPSK Systems. 8th Telecommunication Conference (EuroCon-2011/ConfTele 2011). - Times Cited Scopus: 1
25	Cancela, L. & Pires, J. (2008). Complementary Approaches to Accurately Evaluate the Performance in Direct Detection DPSK Receivers. IEEE Globecom 2008.
26	Cancela, L. & Pires, J. (2007). On the Accuracy of the Gaussian Approximation for Performance Estimation in Optical DPSK Systems with In-Band Crosstalk. IEEE International Conference on Communications (ICC 2007).
27	Cancela, L. & Pires, J. (2007). An Approach for Calculating the Performance of DPSK Direct Detection Systems with Semiconductor Optical Amplifiers. 6th Telecommunication Conference (ConfTele 2007).
28	Cancela, L. & Pires, J. (2005). Impact of Intrachannel Crosstalk on the Performance of Direct-Detection DPSK Optical Systems. Conference on Lasers and Electro-Optics Quantum Electronics & Laser Science (CLEO/QELS'05).
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31	Cancela, L. & Pires, J. (2003). Crosstalk Effects in Large Strictly Non-Blocking Optical Switches Based on Directional Couplers. IEEE International Conference on High Speed Networks and Multimedia Communications (HSNMC'03).
32	Cancela, L. & Pires, J. (2001). Homodyne Crosstalk Penalty in Large Strictly Nonblocking Optical Switches Based on Directional Couplers. Conference Asia-Pacific Optical and Wireless Communications APOC'01.

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34	Cancela, L. & Pires, J. (1999). Influence of Channel Frequency Spacing in Multisource Crosstalk in a Benes Optical Switch. International Conference on Transparent Optical Networks ICTON '99.
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36	Cancela, L. & Pires, J. (1998). Multisource Crosstalk as a Function of Channel Frequency Spacing in an 8x8 Benes Optical Switch. SPIE Conference on All-Optical Networking: Architecture, Control, and Management Issues.
37	Cancela, L. & Pires, J. (1998). Coherent Multipath Crosstalk due to Crossovers in an Active Splitter / Active Combiner Optical Switch. IEEE Conference on Lasers and Electro-Optics-Europe 1998.
38	Pires, J. & Cancela, L. (1997). Factores Limitativos no Projecto de Comutadores Ópticos Espaciais. I Conferência Nacional de Telecomunicações (ConfTele 1997).
39	Cancela, L. & Pires, J. (1997). Coherent Multipath Crosstalk in Benes and Dilated Benes Optical Switches. IEEE Laser Electro-Optics Society 1997 Annual Meeting.

Research Projects			
Project Title	Role in Project	Partners	Period
Next generation high-speed optical networks for metro access	Local Coordinator	IT-Iscte, ASTON UNIVERSITY - Leader (United Kingdom), POLITO - (Italy), UPC - (Spain), TUE - (Netherlands), SSSA - (Italy), Orange - (France), BT - (United Kingdom), SM OPTICS SRL - (Italy), VPIPHOTONICS GMBH - (Germany), TEI - (Spain), CORIANT R&D - (Germany), INFINERA PORTUGAL - (Portugal)	2024 - 2028
2024	Physical Impairment Modelling in Flexible Optical Node Architectures	Global Coordinator	IT-Iscte, Infinera - (Portugal)
2016 - 2018	2016	Analysis and Mitigation of crosstalk Effects in multicore fibre -based Networks	Researcher
IT-Iscte	2016 - 2018	2016	In-band crosstalk in optical communications systems with differential direct detection
Global Coordinator	IT-Iscte	2011 - 2013	2011

Academic Management Positions

Membro (Docente) (2019 - 2022)
Unit/Area: Comissão Científica

Membro (Docente) (2019 - 2022)
Unit/Area: Plenário da Comissão Científica

Sub-diretor (2016 - 2019)
Unit/Area: Department of Information Science and Technology

Membro (Docente) (2016 - 2019)
Unit/Area: Comissão Científica

Sub-diretor (2014 - 2017)
Unit/Area: Institute of Telecommunications-IUL

Membro (2014 - 2017)
Unit/Area: Comissão Científica

Coordenador de ECTS (2014 - 2017)
Unit/Area: Department of Information Science and Technology

Membro (Docente) (2013 - 2015)
Unit/Area: Plenário do Conselho Pedagógico

Membro (Docente) (2013 - 2015)
Unit/Area: Comissão Pedagógica

Membro (Docente) (2011 - 2013)
Unit/Area: Comissão Pedagógica

Membro (Docente) (2011 - 2013)
Unit/Area: Plenário do Conselho Pedagógico