Marco Leite

Contacts

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Curriculum

PhD in Leaders for Technical Industries, from the Technical University of Lisbon (UTL), Portugal. The PhD program international program with the MIT and three Portuguese universities within the Engineering Design and Advanced Manufacturing focus area. Published his work in various fields of research: mechanical design, product development, optimization tools and structural composite materials. Being a lecturer for more than 10 years, currently has a double appointment at IST and at ISCTE Business School, teaching mechanical design an new product development at a master, PhD and executive education.

Research Interests

- Technology evaluation and selection
- Product Design and Development
- Aditive Manufacturing (Rapid Prototyping)

Academic Qualifications

University/Institution	Type	Degree	Period
Instituto Superior Técnico	PhD	Leaders for Technical Industries	2012

External Professional Activities

Period	Employer	Country	Description
--	Instituto Superior Técnico	Portugal	

Teaching Activities

Teaching Year	Sem.	Course Name	Degree(s)	Coord.
2024/2025	2º	New Product Development	Institutional Degree in ISCTE Business School;	No
2023/2024	2º	New Product Development	Institutional Degree in ISCTE Business School;	No
2022/2023	2º	New Product Development	Institutional Degree in ISCTE Business School;	No
2021/2022	2º	New Product Development	Institutional Degree in ISCTE Business School;	No
2020/2021	2º	New Product Development	Institutional Degree in ISCTE Business School;	No
2019/2020	2º	New Product Development		No

Supervisions

• M.Sc. Dissertations

- Concluded

	Student Name	Title/Topic	Language	Institution	Concluding Year
1	Ana Catarina Ribeiro Lopes da Fonseca	Integration of Digital Twins in Portuguese Companies: Identification of Enablers, Barriers and Outcomes	Portuguese	Iscte	2024
2	Carlos Filipe da Silva Rodrigues	Greencitrus - Desenvolvimento de Novos Produtos	Portuguese	Iscte	2015
3	Marta Alexandra Rodrigues Eiras	O Processo de Réplica: O caso de estudo pedagógico do projeto re-food	Portuguese	Iscte	2015

• M.Sc. Final Projects

- Concluded

	Student Name	Title/Topic	Language	Institution	Concluding Year
1	Mariana Areosa Santos	The benefits of additive manufacturing on spare parts management	English	Iscte	2019

2	Maria Teresa Vieira Vilela Onofre	Marketing Emocional: Uma Proposta de Reposicionamento da Mon Chéri	Portuguese	Iscte	2017
3	Donato Boccardi	Creativity for All: Microsoft Italia business case	English	Iscte	2017
4	Isidro Costa Batista de Sousa	Gestão da Inovação: Implementação de novos Serviços na alavancagem de serviços tradicionais	Portuguese	Iscte	2016
5	Názia Sikander Mahomed	O Impacto da Estratégia de Internacionalização no Desenvolvimento do Produto - O caso Vortal	Portuguese	Iscte	2016

Total Citations

Web of Science®	1331
Scopus	1748

Publications

- **Scientific Journals**

- Scientific journal paper

1	Marques, Diana MC, Jabouille, Madalena, Gusmão, Afonso, Leite, M., Sanjuan-Alberte, Paola & Ferreira, Frederico Castelo (2025). Microalgae-enriched (bio) inks for 3D bioprinting of cultured seafood. npj Science of Food. 9 (1), 23 - Times Cited Web of Science®: 9 - Times Cited Scopus: 9 - Times Cited Google Scholar: 12
2	Oliveira, Fernando A Costa, Barreiros, M Alexandra, Sardinha, Manuel, Leite, M., Fernandes, Jorge Cruz & Abanades, Stéphane (2025). Thermochemical performance of ceria coated-macroporous 3D-printed black zirconia structures for solar CO/H2 fuels production. International Journal of Hydrogen Energy. 100, 477-490 - Times Cited Web of Science®: 5 - Times Cited Scopus: 4 - Times Cited Google Scholar: 5
3	P. Areias, Silvestre, N, Vaz, MF & Leite, M. (2025). A new porous constitutive model for additively manufactured PLA. International Journal of Solids and Structures. 307, 113131 - Times Cited Web of Science®: 2 - Times Cited Scopus: 2 - Times Cited Google Scholar: 3
4	Ferreira, Bruna Torres, de Campos, António Alves, Casati, Ricardo, Gon{ç}alves, Afonso, Leite, M. & Ribeiro, Inês (2024). Technological capabilities and sustainability aspects of metal additive manufacturing. Progress in Additive Manufacturing. 9 (6), 1737-1773 - Times Cited Web of Science®: 17 - Times Cited Scopus: 17 - Times Cited Google Scholar: 21

5	Costa Oliveira, Fernando Almeida, Sardinha, Manuel, Galindo, José, Rodríguez, José, Ca{\~n}adas, Inmaculada, Leite, M....Fernandes, Jorge Cruz (2023). Manufacturing and Thermal Shock Resistance of 3D-Printed Porous Black Zirconia for Concentrated Solar Applications. Crystals. 13 (9), 1323 - Times Cited Web of Science®: 7 - Times Cited Scopus: 7 - Times Cited Google Scholar: 8
6	P. Areias, T. Rabczuk, Vaz, M.F., Sardinha, M. & Leite, M. (2022). A consistent algorithm for finite-strain visco-hyperelasticity and visco-plasticity of amorphous polymers. Computer Methods in Applied Mechanics and Engineering. - Times Cited Web of Science®: 12 - Times Cited Scopus: 11 - Times Cited Google Scholar: 15
7	André Oliveira, Leite, M., Luis Reis, Diogo C. Nascimento, António R. Ribeiro, Filipe S. Cunha, Marco Leite, Frederico Alves, Augusto Moita de Deus...M Fátima Vaz (2022). Evaluation of cellular structures with triply periodic minimal surfaces fabricated by additive manufacturing. Engineering Manufacturing Letters. - Times Cited Web of Science®: 8 - Times Cited Google Scholar: 9
8	Bruno Soares, Ribeiro, Inês, Gonçalo Cardeal, Leite, M. & Carvalho, Helena (2021). Social life cycle performance of additive manufacturing in the healthcare industry: the orthosis and prosthesis cases. International Journal of Computer Integrated Manufacturing. 34 (3), 327-340 - Times Cited Web of Science®: 29 - Times Cited Scopus: 32 - Times Cited Google Scholar: 36
9	Monteiro, Diogo Líbano, Vicente, Carlos Miguel Santos, Leite, M. & António Manuel Relógio Ribeiro (2020). Development of a cylindrical coordinate-based fused filament fabrication machine with multiple print heads. International Journal of Advanced Manufacturing Technology. 110 (11-12), 3129-3143 - Times Cited Web of Science®: 1 - Times Cited Scopus: 1 - Times Cited Google Scholar: 4
10	Monteiro, JG, Sardinha, M., Alves, F, AR Ribeiro, Luis Reis, AM Deus...M Fátima Vaz (2020). Evaluation of the effect of core lattice topology on the properties of sandwich panels produced by additive manufacturing. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications. - Times Cited Web of Science®: 48 - Times Cited Scopus: 52 - Times Cited Google Scholar: 63
11	Sardinha, Manuel, Vicente, Carlos MS, Nuno André Mateus De Marques Frutuoso, Leite, M., Ribeiro, A.R. & Luis Reis (2020). Effect of the ironing process on ABS parts produced by FDM. Material Design \& Processing Communications. e151 - Times Cited Google Scholar: 52
12	Sardinha, M., Frutuoso, N., Vicente, C. M. S., Ribeiro, R., Leite, M. & Reis, L. (2020). Influence of seams in the mechanical properties of PLA produced with multiple extrusion modules. Procedia Structural Integrity. 28, 358-363 - Times Cited Web of Science®: 8 - Times Cited Scopus: 9 - Times Cited Google Scholar: 10

13	Vicente, C. M. S., Martins, T. S., Leite, M., Ribeiro, A. & Reis, L. (2020). Influence of fused deposition modeling parameters on the mechanical properties of ABS parts. Polymers for Advanced Technologies. 31 (3), 501-507 - Times Cited Web of Science®: 97 - Times Cited Scopus: 105 - Times Cited Google Scholar: 143
14	Elcin Aleixo Calado, Leite, M. & Silva,A. (2019). Integrating life cycle assessment (LCA) and life cycle costing (LCC) in the early phases of aircraft structural design: an elevator case study. International Journal of Life Cycle Assessment. 24 (12), 2091-2110 - Times Cited Web of Science®: 51 - Times Cited Scopus: 57 - Times Cited Google Scholar: 81
15	Luís Miguel Ferreira, Leite, M., Ribeiro, A.M.R., AM Deus, Luis Reis & Vaz, M.F. (2019). Failure of polymer coated nylon parts produced by additive manufacturing. Engineering Failure Analysis. - Times Cited Web of Science®: 33 - Times Cited Scopus: 37 - Times Cited Google Scholar: 47
16	Vicente, C.M.S., Fernandes, J., Luis Reis, AM Deus, Vaz, M.F. & Leite, M. (2019). Effect of protective coatings on the water absorption and mechanical properties of 3D printed PLA. Frattura ed Integrita Strutturale. 13 (48), 748-756 - Times Cited Web of Science®: 23 - Times Cited Scopus: 35 - Times Cited Google Scholar: 51
17	Silva, A., Leite, M., Vilas-Boas, J. & Simões, R. (2019). How education background affects design outcome: teaching product development to mechanical engineers, industrial designers and managers. European Journal of Engineering Education. 44 (4), 545-569 - Times Cited Scopus: 13 - Times Cited Google Scholar: 20
18	Leite, M., Varanda, A., Ribeiro, A., Silva & Vaz, M.F. (2018). Mechanical properties and water absorption of surface modified ABS 3D printed by fused deposition modelling. Rapid Prototyping Journal. 24 (1), 195-203 - Times Cited Web of Science®: 60 - Times Cited Scopus: 65 - Times Cited Google Scholar: 81
19	Peças, P., Carvalho, H., Salman, H. & Leite, M. (2018). Natural fibre composites and their applications: a review. Journal of Composites Science. 2 (4) - Times Cited Web of Science®: 362 - Times Cited Scopus: 650 - Times Cited Google Scholar: 923
20	Araújo, H., Leite, M., Ribeiro, A. R., Deus, A. M., Reis, L. & Vaz, M. F. (2018). The effect of geometry on the flexural properties of cellular core structures. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications. 233 (3), 338-347 - Times Cited Web of Science®: 45 - Times Cited Scopus: 46 - Times Cited Google Scholar: 56
21	Calado, E. A., Leite, M. & Silva, A. (2018). Selecting composite materials considering cost and environmental impact in the early phases of aircraft structure design. Journal of Cleaner Production. 186, 113-122 - Times Cited Web of Science®: 58 - Times Cited Scopus: 62 - Times Cited Google Scholar: 88

22	Panda, B. N., Leite, M., Biswal, B. B., Niu, X. & Garg, A. (2018). Experimental and numerical modelling of mechanical properties of 3D printed honeycomb structures. Measurement. 116, 495-506 - Times Cited Web of Science®: 114 - Times Cited Scopus: 111 - Times Cited Google Scholar: 146
23	Santos, S., Soares, B., Leite, M. & Jacinto, J. (2017). Design and development of a customised knee positioning orthosis using low cost 3D printers. Virtual and Physical Prototyping. 12 (4), 322-332 - Times Cited Web of Science®: 42 - Times Cited Scopus: 43 - Times Cited Google Scholar: 61
24	Leite, M., Ribeiro, A.J. & Baptista, A. M. R. (2017). A trap of optimizing skills use when allocating human resources to a multiple projects environment. Team Performance Management. 23 (3-4), 110-123 - Times Cited Scopus: 6 - Times Cited Google Scholar: 8
25	Panda, B. N., Bahubalendruni, R. M. V. A., Biswal, B. B. & Leite, M. (2017). A CAD-based approach for measuring volumetric error in layered manufacturing. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science. 231 (13), 2398-2406 - Times Cited Web of Science®: 38 - Times Cited Scopus: 41 - Times Cited Google Scholar: 54
26	Leite, M., Baptista, A. J. & Ribeiro, A. (2016). A road map for implementing lean and agile techniques in SMEs product development teams. International Journal of Product Development. 21 (1), 20-40 - Times Cited Scopus: 25 - Times Cited Google Scholar: 34
27	Leite, M. & Braz, V. (2016). Agile manufacturing practices for new product development: industrial case studies. Journal of Manufacturing Technology Management. 27 (4), 560-576 - Times Cited Web of Science®: 78 - Times Cited Scopus: 82 - Times Cited Google Scholar: 142
28	Leite, M., Silva, A., Henriques, E. & Madeira, J. (2015). Materials selection for a set of multiple parts considering manufacturing costs and weight reduction with structural isoperformance using direct multisearch optimization. Structural and Multidisciplinary Optimization. in press, 1-10 - Times Cited Web of Science®: 12 - Times Cited Scopus: 13 - Times Cited Google Scholar: 15
29	Leite, M., Silva, J. & Duarte de Almeida, I. (2013). Creative teaching of new product development to operations managers. International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering. 7 (10), 1943-1949 - Times Cited Google Scholar: 2
30	Reis, L., Li, B., Leite, M. & Freitas, M. (2005). Effects of non-proportional loading paths on the orientation of fatigue crack path. Fatigue and Fracture of Engineering Materials and Structures. 28 (5), 445-454 - Times Cited Web of Science®: 20 - Times Cited Scopus: 23 - Times Cited Google Scholar: 25

• Books and Book Chapters

- Book chapter

1	Luís Miguel Ferreira, Machado, M., Henriques, E., Leite, M., Paulo Peças & Nuno André Mateus De Marques Frutuoso (2020). State-of-the-Art Review and Roadmap. In Advanced Structured Materials. (pp. 1-56). - Times Cited Scopus: 6 - Times Cited Google Scholar: 7
2	Vicente, C.M.S., Jorge Jacinto, Hugo Carvalho, Ribeiro, A., Luis Reis, Leite, M....Esteves, S. (2020). Design and Modelling Approaches. In Advanced Structured Materials. (pp. 57-91).
3	Leite, M., Silva,A., Silva, A., Silva, Arlindo & Henriques, E. (2014). On the Influence of Material Selection Decisions on Second Order Cost Factors. In Henriques, Elsa and Pecas, Paulo and Silva, Arlindo (Ed.), Technology and Manufacturing Process Selection. (pp. 59-79).: Springer London. - Times Cited Scopus: 1 - Times Cited Google Scholar: 4

• Conferences/Workshops and Talks

- Publication in conference proceedings

1	Sardinha, Manuel, Leite, M., Ramos, T{\^a}nia RP, M Fátima Vaz & Luis Reis (2024). Design Inputs for Fused Filament Fabricated Non-Pneumatic Tires. In --.: Elsevier. - Times Cited Google Scholar: 2
2	Leite, M., Nuno André Mateus De Marques Frutuoso, Bruno Soares & Rodrigo Martins De Matos Ventura (2020). Multiple collaborative printing heads in FDM: The issues in process planning. In Solid Freeform Fabrication 2018: Proceedings of the 29th Annual International Solid Freeform Fabrication Symposium - An Additive Manufacturing Conference, SFF 2018. (pp. 2135-2141). - Times Cited Web of Science®: 3 - Times Cited Scopus: 2 - Times Cited Google Scholar: 8
3	Koronis, Georgios, Meurzec, Rianne Wally, Silva,A., Leite, M., Henriques, E. & Yogiaman, Christine (2019). Cross-cultural differences in creative ideation: A comparison between Singaporean and Portuguese students. In Proceedings of the International Conference on Engineering Design, ICED. (pp. 89-98). - Times Cited Web of Science®: 4 - Times Cited Scopus: 5 - Times Cited Google Scholar: 6
4	Leite, M., Madeira, J., Silva, A., Henriques, E. & Roth, R. (2012). Optimization in materials selection under a multi-part environment with Direct Multi-Search. In The Eleventh International Conference on Computational Structures Technology.
5	Leite, M., João Lope & Silva, A. (2005). Estudo experimental e analítico, em compressão de diferentes espumas para aplica{ç}ão em constru{ç}ão sandwich". In 6{\textordmasculine} Congresso Nacional de Mec{\^a}nica Experimental. - Times Cited Google Scholar: 4
6	Leite, M., Silva, A. & Manuel Freitas (2005). Elastic Behaviour of Z Reinforced Sandwich Beams. In Sandwich Structures 7: Advancing with Sandwich Structures and Materials. (pp. 271-280).: Springer. - Times Cited Google Scholar: 1
7	Marta Rodrigues, Leite, M., Carlos Coelho & Luís Miguel Ferreira (2005). Comportamento mecânico de placas de material compósito sujeito a impacto. In 6º Congresso Nacional de Mecânica Experimental, Açores, Portugal.

8	Leite, M., Silva, A. & Manuel Freitas (2004). Elastic behaviour of reinforced sandwich beams. In The Seventh International Conference on Computational Structures Technology.
9	Manuel Freitas, Luis Reis, Leite, M. & Bin Li (2003). Effects of the Non-Proportional Loading Path on the Fatigue Crack Path. In FCP2003.

- Talk

1	Leite, M., Silva, A., Madeira, J., Henriques, E. & Roth, R. (2012). Optimization of Materials Selection in a Multi-Part Environment with Direct Multi-Search. PROCEEDINGS OF THE ELEVENTH INTERNATIONAL CONFERENCE ON COMPUTATIONAL STRUCTURES TECHNOLOGY.
2	Leite, M., Silva, A., Henriques, E., Roth, R. & Kirchain, R. (2010). Materials selection considering technical, economic and environmental performance. Poster Session presented at: Second Annual MIT-Portugal Program Conference: Creating Value through Systems Thinking.
3	Leite, M., Silva, A. & Manuel Freitas (2005). Elastic Behaviour of Z Reinforced Sandwich Beams. Sandwich Structures 7: Advancing with Sandwich Structures and Materials. 271-280
4	Manuel Freitas, Freitas, R., Luis Reis, Leite, M. & Bin Li (2004). Analysis of failures due to the effects of the non-proportional multiaxial fatigue loadings. Poster Session presented at: First International Conference on Engineering Failure.
5	Leite, M., Silva, A. & Manuel Freitas (2004). Elastic behaviour of reinforced sandwich beams. The Seventh International Conference on Computational Structures Technology.
6	Leite, M., Silva, A. & Manuel Freitas (2004). Elastic behaviour of sandwich beams – part 1: Experimental study. 9th Portuguese Conference on Fracture.
7	Leite, M. (2004). Sandwich construction. Apresentação IST, DesignStudio.
8	Manuel Freitas, Luis Reis, Leite, M. & Bin Li (2003). Effects of the Non-Proportional Loading Path on the Fatigue Crack Path. FCP2003.

• Other Publications

- Non-peer-reviewed papers

1	Miranda, A., Leite, M., Luis Reis, Copin, E., Vaz, M.F. & AM Deus (2021). Evaluation of the influence of design in the mechanical properties of honeycomb cores used in composite panels. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications. 235 (6), 1325-1340 - Times Cited Web of Science®: 15 - Times Cited Scopus: 17 - Times Cited Google Scholar: 23
2	Magalhães, S., Sardinha, M., Vicente, C.M.S., Leite, M., Ribeiro, A., Vaz, M.F....Luis Reis (2021). Validation of a low-cost selective powder deposition process through the characterization of tin bronze specimens. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications. 235 (12), 2681-2691 - Times Cited Web of Science®: 3 - Times Cited Scopus: 3 - Times Cited Google Scholar: 4

3	Marta Rodrigues, Guedes, M., Olhero, S., Chefdor, A., Branco, A.C., Leite, M....Figueiredo-Pina, C.G. (2020). Development of free binder zirconia-based pastes for the production of dental pieces by robocasting. Journal of Manufacturing Processes. 57, 1-9 - Times Cited Web of Science®: 34 - Times Cited Scopus: 33 - Times Cited Google Scholar: 40
4	Bru, J., Leite, M., Ribeiro, A., Luis Reis, AM Deus & M Fátima Vaz (2020). Bioinspired structures for core sandwich composites produced by fused deposition modelling. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications. 234 (3), 379-393 - Times Cited Web of Science®: 35 - Times Cited Scopus: 32 - Times Cited Google Scholar: 43
5	Leite, M. (2019). Design for personalized medicine in orthotics and prosthetics. Procedia CIRP. - Times Cited Web of Science®: 34 - Times Cited Scopus: 39 - Times Cited Google Scholar: 53
6	H Araújo, Leite, M., Ribeiro, A.M.R., AM Deus, Luis Reis & Vaz, M.F. (2019). Investigating the contribution of geometry on the failure of cellular core structures obtained by additive manufacturing. Frattura ed Integrita Strutturale. 13 (49), 478-486 - Times Cited Scopus: 14 - Times Cited Google Scholar: 21
7	Leite, M. (2019). 0-3D Design method: a new design management technique to support Design for Manufacturing. Procedia CIRP. - Times Cited Web of Science®: 3 - Times Cited Scopus: 2 - Times Cited Google Scholar: 4
8	Leite, M. (2019). Design for AM: Contributions from surface finish, part geometry and part positioning. Procedia CIRP. - Times Cited Web of Science®: 4 - Times Cited Scopus: 7 - Times Cited Google Scholar: 13
9	Leite, M. (2016). A road map for implementing lean and agile techniques in SMEs product development teams. Int. J. of Product Development. - Times Cited Web of Science®: 17
10	Leite, M., da Silva, J. M. Vilas-Boas & Duarte de Almeida, I. (2013). Creative Teaching of New Product Development to Operations Managers. International Journal of Mechanical, Industrial Science and Engineering. 7, 146-152
11	Leite, M., Madeira, J., Silva, J., Henriques, E. & Roth, R. (2012). Optimization of materials selection in a multi-part environment with direct multi-search. Civil-Comp Proceedings. 99

- Other publications

1	Nuno André Mateus De Marques Frutuoso, João Francisco De Aragão Barros E Alvim Boto, Rodrigo Martins De Matos Ventura, Leite, M., Luis Filipe Galrão Dos Reis, António Manuel Relógio Ribeiro...Bruno Soares (2018). MODULAR ADDITIVE MANUFACTURING SYSTEM. - Times Cited Scopus: 29 - Times Cited Google Scholar: 4

2	Silva, J., João Lope, Pedro Almeida, Luis Reis, Leite, M., Silva, A....Silva, J. (2006). Experimental testing of a natural cork-based composite: shear behaviour comparison with other materials for sandwich applications. Poster Session presented at: COMPTEST2006 - Composites Testing and Model Identification 2006.

Awards

Best Professor for the Master (MSc) in Management of Services and Technology ISCTE-IUL (2013)