

## PERSONAL INFORMATION



*Family name, First name:* da Silva, Lucas

*Date of birth:* 5 August 1973 (50 years old)

*Nationality:* Portuguese

*URL for web site:* [www.ajpu.pt/en/](http://www.ajpu.pt/en/)

*Researcher unique identifiers:* [ORCID](#), [SCOPUS](#), [Web of Science](#), [Google Scholar](#)

I am a Full Professor at the Department of Mechanical Engineering (DEMec) of the University of Porto (UP). I have a BSc and MSc in mechanical engineering by the Faculty of Engineering of the University of Porto (FEUP) and I have obtained my PhD at the University of Bristol (UK) in 2004 under the supervision of Prof Robert Adams on composite structural adhesive joints. Since then, I have researched advanced joining processes at FEUP, with an initial focus on the production and design of adhesive joints later complemented by research on welding and joining by plastic deformation.

I currently lead the [Advanced Joining Processes Unit](#) research team at Institute of Science and Innovation in Mechanical and Industrial Engineering (INEGI), composed of **39 members** (14 MSc students, 17 PhD students, 5 postdoctoral researchers and 3 teachers). The unit is divided into groups studying adhesive bonding, joining by forming, welding, bio-joining, machine design and engineering education.

Generally, the work we carry out is based on rigorous experimental tests supported by a theoretical analysis with analytical models, and by more advanced numerical methods, such as the finite element method. These studies always have a direct connection to real engineering cases (mainly related to automotive and aeronautical industries) to ease technological transfer with the industry.

### • Education

- |      |   |
|------|---|
| 2011 | Aggregation in Mechanical Engineering, DEMec, FEUP, Portugal.   |
| 2004 | PhD in Mechanical Engineering, Faculty of Engineering, Department of Mechanical Engineering, University of Bristol, United Kingdom. |
| 1999 | Master in Mechanical Engineering, DEMec, FEUP, Portugal.  |

### • Academic & Research Positions

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|----------------|--|
| 1996 – 2019    | Assistant and Associate Professor, DEMec, FEUP, Portugal.  |
| 2019 – present | <a href="#">Full Professor</a> , DEMec, FEUP, Portugal.  |
| 2020 – present | Director of <a href="#">Advanced Joining Processes Unit</a> (AJPU) research unit, <a href="#">Instituto de Ciência e Inovação em Engenharia Mecânica e Engenharia Industrial</a> (INEGI), UP, Portugal |

### • Main Fellowships and Awards

- |             |  |
|-------------|--|
| 2000 – 2003 | PhD Scholarship, Calouste Gulbenkian Foundation, Portugal. |
|-------------|--|

- 2010 Donald Julius Groen Prize 2010 by the Structural Technology and Materials Group of the Institution of Mechanical Engineers, United Kingdom.
- 2010 SAGE Best Paper Award by SAGE, United Kingdom.
- 2013 and 2018 Scientific Excellence Award received from FEUP, Portugal.
- 2023 Pedagogical Excellence Award received from FEUP, Portugal.

## SCIENTIFIC ACTIVITY

I am the author and editor of 34 research books, and author of 59 chapters of international books. I published **485 scientific papers** (430 as author and 55 as editor) **indexed to the ISI database**, 61 scientific papers indexed to SCOPUS, 28 articles not indexed in either, and 772 conference articles. I also edited 31 conference proceedings. According to [SCOPUS](#), the papers were cited 18,250 times, corresponding to an **h-index of 71**. The evolution of citation according to the SCOPUS database is shown in Figure 1.

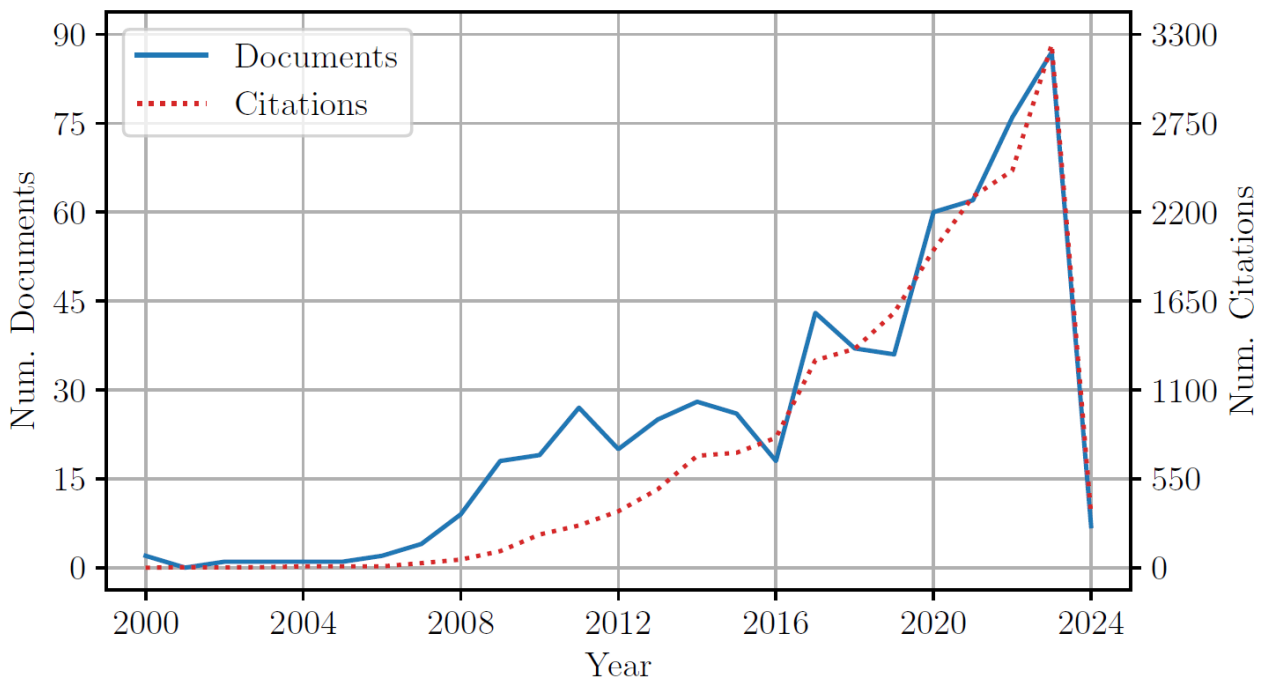


Figure 1 - Publications and Citations per year (Source SCOPUS).

One of the papers was awarded the **SAGE Best Paper Award 2010** and **Donald Julius Groen Prize 2010** (both awarded by IMechE, Institution of Mechanical Engineers). I received the **FEUP Scientific Excellence Award** in [2013](#) (a prize that recognizes excellence in research activities carried out in the last 5 years), and a second time in [2018](#).

I am **Editor-in-Chief** of the ISI journal [The Journal of Adhesion](#) (Taylor & Francis, Impact Factor, IF: 2.2), the oldest journal related to adhesion (since 1969), since 2013. I am also Editor-in-Chief of the ISI journal [Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications](#) (Sage, IF: 2.4) since 2014. I founded in 2014 the [U. Porto Journal of Engineering](#) (published by the University of Porto), increasing international visibility to the research developed at FEUP (indexed top SCOPUS). I also founded in 2019 a new journal related to advanced joining processes published by Elsevier, the [Journal of](#)

[Advanced Joining Processes](#) (IF: 4.3). I am also the Editor-in-Chief of [Discover Mechanical Engineering](#) (Springer), of the [International Journal of Mechanical Engineering Education](#) (Sage, IF: 1.4) and the [Journal of Machine Design and Automation Intelligence](#) (DeGruyter).

I have also a very active role in the organization of international scientific conferences on joining methods ([Adhesive Bonding](#), [Industrial Applications of Adhesives](#) and [Advanced Joining Processes](#)), materials, mechanics and structures ([Materials Design and Applications](#), [Mechanics of Solids, Durability, Repair and Maintenance of Structures](#) and [Vehicle Body Engineering](#)), manufacturing ([Engineering Manufacture](#)), [Machine Design](#) and education ([Science and Technology Education](#)) and bio-joining ([Bio-Joining](#)). I have also created the first [online course on advanced joining processes](#), together with other established groups in the world.

- **Scientific projects**

I have **coordinated 25 research projects** related to joining since 2006 representing a total of approximately **3 million euros**. The projects were mainly financed by the Portuguese Science Foundation (FCT) (€ 2 million), and the European Union (€ 1 million). I also contributed to 12 projects as a participating researcher. 12 PhD students and five postdoctoral students of the candidate obtained **FCT scholarships** totalling approximately **1 million euros**.

- **International projects**

- 2008 – 2009 Adhesively bonded assemblies in a marine environment, funded by METRI2 (European Union). Budget: 20k€.
    - 2011 – 2012 Experimental characterization of the mechanical behaviour of the structural adhesive XNR6852, funded by Nagase-Chemtex (Japan). Budget: 10k€.
    - 2013 – 2015 Durability study of adhesives, funded by Nagase-Chemtex (Japan). Budget 54k€.
    - 2014 – 2017 Functionally graded bonded joints with thermally expandable particles, funded by CNPq (Brazil). Budget: 29k€.
    - 2015 – 2018 Impact strength of bonded structures used in the automotive industry, funded by Nagase-Chemtex (Japan). Budget: 60k€.
    - 2015 – 2018 European Harmonized Training for Personnel working with Adhesive Bonding Technology, funded by Erasmus+ (European Union). Total budget: 437 k€.
    - 2018 – 2021 Impact strength of bonded structures used in the automotive industry, funded by Nagase-Chemtex (Japan). Budget: 60k€.
    - 2019 – 2022 Adhesion: quantitative analysis and the effect of ageing, funded by Robert Bosch GmbH (Germany). Budget: 103k€.
    - 2020 – 2024 Impact strength of bonded structures used in the automotive industry, funded by Nagase-Chemtex (Japan). Budget: 60k€.
    - 2022 – 2024 Boosting Knowledge of Adhesive Bonding Personnel KNOWBOND, funded by Erasmus+ (European Union). Total budget: 266 k€.
    - 2022 – 2025 Fundamentals in creep behaviour of PSAs - Basic understanding and modelling, funded by Robert Bosch GmbH (Germany). Budget: 196k€.

2023 – 2025 A comprehensive methodology to analyze and optimize adhesive bonding processes, funded by Smart Eureka (European Union). Total budget: 1770k€.

○ **National projects**

2004 – 2005 Mechanical characterization of structural adhesives, funded by FEUP. Budget: 1.5k€.

2006 – 2010 Fracture mechanics applied to the design of adhesively bonded joints, funded by Luso-American Development Foundation. Budget 52.5k.

2007 – 2010 Adhesively bonded joints for aerospace applications, Funded by FCT. Budget: 100k€.

2008 – 2009 Development of a software for the design of adhesive joints, funded by University of Porto. Budget: 4k€.

2010 – 2013 Adhesively bonded functionally graded joints, Funded by FCT. Budget 105k€.

2010 – 2013 Improved toughness of adhesives filled with cork micro particles, funded by FCT. Budget: 100k€.

2012 – 2012 The use of the Boundary Element Method (BEM) in the analysis of adhesive joints, funded by Associate Laboratory of Energy, Transport and Aeronautics (LAETA). Budget: 11k€.

2013 – 2016 Development of a cohesive zone model for adhesive joints that includes environment and fatigue degradation, funded by FCT. Budget: 210k€.

2018 – 2021 Fracture envelope of adhesives at high strain rates, funded by FCT. Budget: 237k€.

2018 – 2021 Adhesively bonded graded joints using magnetized cork micro particles, funded by FCT. Budget: 238.6k€.

2018 – 2021 Design methodology for impact resistant bonded multi-material automotive structures, funded by FCT. Budget: 236k€.

2020 – 2023 A smart and eco-friendly adhesively bonded structure for the next generation mobility platforms, funded by FCT. Budget: 249.4k€.

2022 – 2024 New approaches to improve joint strength and reduce delamination of composite adhesive joints, funded by FCT. Budget: 249.8k€.

● **Membership of scientific societies**

2002 – present Society for Adhesion and Adhesives, UK.

2004 – present Portuguese Society of Chartered Engineers, Portugal.

2012 – present European Adhesion Societies Group (EURADH) representing the Portuguese Adhesion Society.

2014 – present American Society of Mechanical Engineers - ASME, USA.

● **Editor-in-Chief**

2013 – present [The Journal of Adhesion](#) (Taylor & Francis, IF 2.2, Q2).

2014 – present [Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications](#) (Sage, IF 2.4, Q3).

2014 – present [U. of Porto Journal of Engineering](#) (UP, SCOPUS indexed).

- 2019 – present [Journal of Advanced Joining Processes](#) (Elsevier, IF 4.1, Q1).
- 2022 – present [Discover Mechanical Engineering](#) (Springer).
- 2022 – present [International Journal of Mechanical Engineering Education](#) (Sage, IF: 1.4, Q2).
- 2023 – present [Journal of Machine Design and Automation Intelligence](#) (DeGruyter).

- **Editorial board participations**

- 2005 – present [International Journal of Adhesion and Adhesives](#) (Elsevier).
- 2005 – present [Science and Engineering of Composite Materials](#) (De Gruyter).
- 2009 – 2019 [Journal of Adhesion Science and Technology](#) (Taylor & Francis).
- 2010 – present [Frattura ed Integrità Strutturale](#) (International Journal of the Italian Group of Fracture).
- 2011 – 2012 [The Journal of Adhesion](#) (Taylor & Francis).
- 2012 – 2014 [Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications](#) (Sage).
- 2012 – present [The Annals of “Dunarea de Jos” University of Galati, Welding Equipment and Technology](#) (University of Galati).
- 2012 – present [Reviews of Adhesion and Adhesives](#) (Screvener Publishing).
- 2013 – 2021 [Applied Adhesion Science](#) (Springer).
- 2018 – 2022 [Advances in Materials Science and Engineering](#) (Hindawi).
- 2020 – present [Materials](#) (MDPI).
- 2021 – present [Applied Research](#) (Wiley-VCH).
- 2022 – present [Journal on Teaching Engineering](#) (Universidade do Porto, UP).
- 2022 – present [Engineering Manufacturing Letters](#) (UP).
- 2022 – present [Journal on Mechanics of Solids](#) (UP).

- **Peer review activities in academic journals**

Since 2004, I have reviewed a total of **370 papers** for **63 different ISI indexed peer reviewed journals** and 8 papers for 6 different non-ISI indexed journals.

I have served as reviewer for journals such as the [International Journal of Adhesion and Adhesives](#) (Elsevier), [The Journal of Adhesion](#) (Taylor & Francis), [Journal of Adhesion Science and Technology](#) (Taylor & Francis), [Composites Part A: Applied Science and Manufacturing](#) (Elsevier), [Composites Science and Technology](#) (Elsevier), [Engineering Structures](#) (Elsevier), [Mechanics of Advanced Materials and Structures](#) (Taylor & Francis), [Journal of Composites for Construction](#) (ASCE), [Composite Structures](#) (Elsevier), [Thin Solid Films](#) (Elsevier), [Journal of Materials Processing Technology](#) (Elsevier), [Computational Materials Science](#) (Elsevier), [Composites Part B: Engineering](#) (Elsevier), among others.

- **Project and event reviewing activities**

- 2005 – present Reviewer of 19 international research projects for 8 funding institutions and reviewer of the Portuguese Agency for Assessment and Accreditation of Higher Education (A3ES).

2022 – present External evaluator of the NATO AVT-361 Research Workshop on Certification of Bonded Repair on Composite Aircraft Structures.

- **Major research collaborations**

2004 – present Prof Robert Adams, Structural adhesive joints, University of Bristol, United Kingdom.

2004 – present Prof Chiaki Sato, Functionally graded joints, Tokyo Institute of Technology, Japan.

2012 – present Dr Toshi Kouma, Mechanical characterization of structural adhesives, Nagase Chemtex, Japan.

2017 – present Dr Rakesh Goyal, Design of adhesive joints under fatigue conditions, John Deere, Moline Technology Innovation Center, USA.

2019 – present Dr Patrick Stihler, Design of bonded joints for long term conditions considering hygrothermal ageing and creep loads, Robert Bosch GmbH, Germany.

- **Organization of scientific meetings**

Chairman of International Conference on Structural Adhesive Bonding (AB) – 2011, 2013, 2015, 2017, 2019, [2021](#), [2023](#), [2025](#).

Chairman of International Conference on Materials Design and Applications (MDA) – 2016, 2018, [2020](#), [2022](#), [2024](#).

Chairman of International Conference on Advanced Joining Processes (AJP) – [2019](#), [2021](#), [2023](#), [2025](#).

Chairman of International Conference on Industrial Applications of Adhesives (IAA) – [2020](#), [2022](#), [2024](#).

Chairman of International Conference on Science and Technology Education (STE) – [2020](#), [2021](#), [2022](#), [2024](#).

Chairman of International Conference on Machine Design (MD) – [2021](#), [2023](#), [2025](#).

Chairman of International Conference on Engineering Manufacture (EM) – [2022](#), [2024](#).

Chairman of International Conference on Mechanics of Solids (MS) – [2022](#), [2024](#).

Chairman of International Conference on Durability, Repair and Maintenance of Structures (DRMS) – [2023](#), [2025](#).

Chairman of International Conference on Vehicle Body Engineering (VBE) – [2023](#), [2025](#).

Chairman of International Conference on Bio-Joining (BJ) – [2024](#).

- **Participation in academic juris**

I have participated in a total of **157 academic juris for academic degrees**, (54 outside FEUP) since 2006. Of these, I have participated in 102 MSc juris, 44 PhD juris and 11 Habilitation juris.

I have been a member of the jury for 14 academic hiring processes, 7 of these for Assistant Professors, 5 for Associate Professors and 2 for Full Professors.

- **Invited talks and courses**

I have been regularly invited to give talks in multiple institutions throughout the world, with a total of **64**

**invited talks** since 2004.

I have been invited to talk at diverse prestigious academic institutions such as the Ecole National Supérieur d'Ingenieur de Brest (France), the University of Hiroshima (Japan), Tokyo Institute of Technology (Japan), Dalian University of Technology (China), University of Seville (Spain), the Warsaw University of Technology (Poland) and Politecnico di Milano (Italy). I have also been invited to give talks at world-leading enterprises, such as Mazda (Japan), EADS Astrium (France), Nagase-Chemtex (Japan), the Fraunhofer Institute (Germany) and Petrobras (Brazil). I have also been invited to give a 4 hour course on structural adhesive bonding at the international [Joining in Car Body Engineering](#) conference, organised by Automotive Circle International, which brings together the world's leading car manufacturers. The first edition of this course took place in 2011.

- **Preparation of technical and legislation standards**

2015 – present Portuguese ANB (*Authorized National Body*) specialist in the area of adhesives to carry out a review of the EWF (European Welding Federation) guidelines linked to training in the area of adhesives (*Adhesive Bonder, Adhesive Specialist, Adhesive Engineer*).

- **Development of software**

2009 – present Development and commercialization of an online software ([JointDesigner](#)) to design adhesive joints.

## TEACHING ACTIVITIES

My teaching activity focuses on materials (structure and mechanical behaviour) and structural adhesive bonding (manufacturing and mechanical design) and have an **average grade of 6 out of 7 in the student evaluation queries**.

I was the recipient of the [Pedagogical Excellence Award from FEUP in 2023](#) and have received the 'Projects of Pedagogical Innovation of the U. Porto' award in 2017/18 for the creation of the course Publication and scientific writing for e-learning format and English language. Between November 2014 and 2021, I was the **director** of the [Integrated Master's Degree in Mechanical Engineering](#) (MIEM) at FEUP. This course was then reformulated into two separate ones: the [Bachelor](#) and [Master in Mechanical Engineering](#), of which I also served as the director until early 2023. I founded in 2019 the [International Conference on Science and Technology Education](#) which took place for the first time in 2020, with the aim of stimulating education topics (teaching methods, assessments, etc.) to improve teaching practices of DEMec, and was recently invited to be Editor-in-Chief of [International Journal of Mechanical Engineering Education](#).

- **Academic courses**

1996 – 2007 Bachelor in Mechanical Engineering (LEM), FEUP (Before Bologna) -10 courses taught.

1996 – 2007 Bachelor in Industrial Engineering and Management (LEGI), FEUP (Before Bologna) – 4 courses taught.

## CV – Lucas F. M. da Silva

- 2006 – 2021 Integrated Master in Mechanical Engineering (MIEM), FEUP – 9 courses taught.
- 2006 – 2021 Integrated Master in Industrial Engineering and Management (MIEIG), FEUP – 2 courses taught.
- 2009 – 2019 Integrated Master in Mechanical and Industrial Engineering and Management, ESTGV, IPV
- 2007 – Present Doctoral Program in Mechanical Engineering (PRODEM), FEUP – 1 course taught.
- 2014 – Present Continuous Education Course, FEUP – 1 course taught.
- 2016 – 2019 Master in Industrial and Product Design (MDIP), FEUP – 1 course taught.
- 2021 – Present Bachelor in Mechanical Engineering (LEM), FEUP (Post-Bologna) – 1 course taught.
- 2021 – Present Master Mechanical Engineering (MEM), FEUP (Post-Bologna) – 1 course taught.
- 2021 – Present Bachelor in Industrial Engineering and Management (LEGI), FEUP (Post-Bologna) – 1 course taught.

### • Textbooks

- 2007 Lucas F M da Silva, A G de Magalhães, M F S F de Moura, 'Juntas adesivas estruturais', Publindústria, Porto.
- 2008 Lucas F M da Silva, T Duarte, V Antunes, 'Problemas e trabalhos práticos de metalurgia', FEUP edições, Porto.
- 2010 Lucas F M da Silva, J Silva Gomes, 'Introdução à resistência dos materiais', Publindústria, Porto.
- 2011 Lucas F M da Silva, A Öchsner, R D Adams (Editors), 'Handbook of Adhesion Technology' (2 volumes) Springer, Heidelberg.
- 2012 Lucas F M da Silva, 'Comportamento mecânico dos materiais', Publindústria, Porto.
- 2013 Lucas F M da Silva, F J L Alves, A T Marques, 'Materiais de construção', Publindústria, Porto
- 2016 Lucas F M da Silva, T Duarte, V Antunes, 'Problemas e trabalhos práticos de metalurgia', 2ª edição, Publindústria, Porto.
- 2017 Lucas F M da Silva, R Carbas, E Marques, 'Problemas e trabalhos práticos de juntas adesivas estruturais', Publindústria, Porto.
- 2017 Lucas F M da Silva, F J L Alves, A T Marques, T Duarte, V Antunes, P Nóvoa, 'Problemas e trabalhos práticos de materiais de construção', Publindústria, Porto.
- 2018 Lucas F M da Silva, A Öchsner, R D Adams (Editors), 'Handbook of Adhesion Technology' (2 volumes). Second Edition Springer, Heidelberg.
- 2021 E A S Marques, A Q Barbosa, A Akhavan-Safar, R Carbas, Lucas F M da Silva, 'Introduction to Adhesive Bonding', Wiley, Weinheim.
- 2021 E A S Marques, R J C Carbas, A F G Tenreiro, Lucas F M da Silva, 'Introdução às ligações adesivas estruturais', Publindústria, Porto.
- 2022 E A S Marques, R J C Carbas, A Akhavan-Safar, A F G Tenreiro, Lucas F M da Silva, 'Structural adhesive bonding in aerospace applications', Publindústria, Porto.
- 2023 R J C Carbas, E A S Marques, C Borges, Lucas F M da Silva, 'Introdução à Ciência e Engenharia dos Materiais – Teoria', Publindústria, Porto.
- 2023 R J C Carbas, E A S Marques, C Borges, F Sousa, Lucas F M da Silva, 'Introdução à Ciência e Engenharia dos Materiais – Prática', Publindústria, Porto.
- 2023 E A S Marques, A Q Barbosa, A Akhavan-Safar, R Carbas, Lucas F M da Silva, 'Adhesive Bonding Technology and Testing', Wiley, Weinheim.



## TECHNOLOGY TRANSFER

I have carried out **65 consulting projects** representing more than **1.3 million euros** for several national companies (e.g. Bosch, Amtrol, Bicafe, etc.) and international companies (e.g. Nagase Chemtex, Alstom, Honda, John Deere, Aston Martin, Arcelor Mittal, etc.) related to adhesion problems.

- **Examples of key consulting projects**

2014 – 2015	Bosch Termotecnologia (Cacia, Portugal) Creep study of Glass/Aluminium bonding study on a heater.
2015 – 2016	Honda R&D Co., Ltd. (Saitama, Japan). Mixed mode fracture energy testing of 3 types of adhesives for the automotive industry.
2018 – 2018	John Deere (Moline, Illinois, USA) Definition of a fatigue design methodology for adhesive joints.
2018 – 2021	Consortium of companies – John Deere (Moline, Illinois, USA), Safran (Paris, France), Infineon (Regensburg, Germany), Kobe Steel (Kobe, Japan) e Henkel (Rocky Hill, USA) Creation of a consortium of companies to develop a design methodology for fatigue and impact of bonded joints.
2021 – 2021	ArcelorMittal (Montataire, França) Study of the impact of inorganic fillers on the failure pattern mode in bonded joints.
2021 – 2024	Consortium of companies – ArcelorMittal (Montataire, France), Colquímica (Valongo, Portugal), General Motors (Detroit, Michigan, USA), Honda USA (Los Angeles USA), Sunstar (Etoy, Switzerland), Aston Martin (Gaydon, UK) and Kistler (Winterthur, Switzerland). Creation of a consortium of companies to develop a universal device for characterizing the strength and fracture energy of adhesives.
2023 – 2026	Consortium of companies – Avesta Battery & Energy Engineering (Ninove, Belgium), Momentive (New-York, USA), Sabic (Gelen, Netherlands), Volvo (Gothenburg, Sweden) and Aston Martin (Gaydon, UK). Creation of a consortium of companies to develop a method of producing batteries with dismantlable adhesives.

- **Patents**

I have **12 provisional patent applications** in Portugal, **one application in Spain** and **two applications in Germany**. Examples of some of the most relevant are provided below:

2013/09/26	F J P Chaves, Lucas F M da Silva, M F S F de Moura, Apparatus and method for characterization of bonded joints mixed-mode I+II fracture, Portuguese Patent Provisory Request nº 107188 B, Reference UPIN PAT. 180/13.
2016/11/03	<a href="#">A F C Guimarães, J A Gonçalves, R J C Carbas, A M Lopes, C M da Silva, Lucas F M da Silva, Torsion machine for adhesive joints, Portuguese Patent Provisory Request nº 109717, Reference UPIN PAT. NPAT 268/16.</a>
2018/07/06	Lucas F M da Silva, X Shang, E A S Marques, J J M Machado, R J C Carbas, D Jiang, Transverse

reinforcement of composite materials with high toughness and ductility surface layers, Portuguese Patent Provisory Request nº 20181000046884, Reference UPIN PAT. NPAT 328/2018.

- 2020/05/01 J Abenojar, A Q Barbosa, M A Martinez, R Carbas, F J V Lopez, Lucas F M da Silva, J C del Real, Method for producing magnetic cork particles, U.S. or International Application No. 16/635,947.
- 2022/03/01 C Borges, E Marques, C Ueffing, P Weißgraeber, L F M da Silva, Prüfkörper, Prüfvorrichtung und Verfahren zur Überprüfung von stoffschlüssigen Verbindungen sowie Verwendung des Prüfkörpers, German Patent and Trade Mark Office Application No. 102022202551.2.
- 2022/02/28 D S Correia, E A S Marques, R J C Carbas, A Akhavan-Safar, Lucas F M da Silva, Single loading four-step testing Apparatus for mechanical characterization of adhesives, Portuguese Patent Provisory Request no 20221000001041.
- 2023/12/11 B Simões, Lucas F M da Silva, E A S Marques, E Fernandes, R J C Carbas, S Maul, P Stihler, P Weißgraeber, Creep testing machine for pressure sensitive adhesives. German Patent and Trade Mark Office Application.
- 2023/12/11 Lucas F M da Silva, E A S Marques, A M Lopes, C M da Silva, R J C Carbas, A F G Tenreiro, J Schweizer, A F G van Herwijnen, J W K Schöttner, M D E Walet, P L Rosendahl, V Adam, F Rheinschmidt, P Weißgraeber, Device for testing snow specimens. Portuguese Patent Provisory Request.

## ACADEMIC MANAGEMENT

I began my academic career in 1996 as a Trainee Assistant of the Materials and Technological Processes Section (SMPT) of the Department of Mechanical Engineering (DEMec) of FEUP. I am currently **Full Professor** of the same institution. I was the coordinator of SMPT from 2006 to 2014. Since November 2014, I served as the **director of the [Integrated Master's Degree in Mechanical Engineering](#)** (MIEM) at FEUP, which was recently reformulated into two separate ones: bachelor and master in mechanical engineering. I founded in 2012 and **chair the [Portuguese Adhesion Society](#)** (APAA). APAA is part of the European Adhesion Societies Group (EURADH). I presided over EURADH between 2016 and 2018 and APAA organized the prestigious [EURADH](#) conference in 2018.

I supervised (dissertations concluded) 120 master students, 26 PhDs (with a thesis which was awarded the António de Almeida Foundation in 2012) and 10 post-doctoral ones. I also supervised 42 research fellows.

### • Institutional responsibilities

- 2006 – 2014 Head of the Materials and Technological Processes Group, FE/ DEMec, UP/ Portugal.
- 2014 – 2021 Director of the [Integrated Master in Mechanical Engineering](#), FE/ DEMec, UP/ Portugal.
- 2021 – 2023 Director of the [Bachelor in Mechanical Engineering](#), FE/ DEMec, UP/ Portugal.
- 2021 – 2023 Director of the [Master in Mechanical Engineering](#), FE/ DEMec, UP/ Portugal.
- 2012 – present Founder and Director of the [Portuguese Adhesion Society](#), Portugal.
- 2016 – 2018 Chairman of the European Adhesion Societies Group (EURADH).