CURRICULUM VITÆ

DE

RICARDO NUNO MADEIRA SOARES BRANCO

JUNHO DE 2017

Elementos de identificação

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Morada profissional: Departamento de Engenharia Mecânica, Universidade de Coimbra, Rua Luís Reis Santos, Pinhal de Marrocos, 3030-788 Coimbra, Portugal.
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Situação Laboral: Professor Auxiliar do Departamento de Engenharia Mecânica da Faculdade de Ciências e Tecnologia da Universidade de Coimbra.
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Habilitações académicas

A-1. Doutoramento em Engenharia Mecânica, em 2013, na especialidade de Construção Mecânica pela Faculdade de Ciências e Tecnologia da Universidade de Coimbra com nota final de "Aprovado com Distinção e Louvor por Unanimidade". Título da Tese: Fatigue life prediction of notched components subjected to complex loading. Orientador: Prof. José Domingos Moreira da Costa, Professor Associado com Agregação da Universidade de Coimbra. Co-Orientador: Prof. Fernando Jorge Ventura Antunes, Professor Auxiliar da Universidade de Coimbra.

A-2. Mestrado em Engenharia Mecânica, em 2006, na área de especialização em Conceção de Equipamentos, pela Faculdade de Ciências e Tecnologia da Universidade de Coimbra, com nota final de Muito Bom. Título da Dissertação: Estudo numérico de propagação de fendas por fadiga em provetes M(T). Orientador: Prof. Fernando Jorge Ventura Antunes, Professor Auxiliar da Universidade de Coimbra.

A-3. Licenciatura em Engenharia Mecânica, em 1999, no ramo de Produção, pela Faculdade de Ciências e Tecnologia da Universidade de Coimbra com nota final de Bom, 15 valores.

Atividade docente

É docente do Grupo de Mecânica Estrutural do Departamento de Engenharia Mecânica da Faculdade de Ciências e Tecnologia da Universidade de Coimbra, desde 1 de setembro de 2016.

Foi docente da área científica de Engenharia Mecânica do Departamento de Engenharia Mecânica do Instituto Superior de Engenharia de Coimbra do Instituto Politécnico de Coimbra, entre 2000 e 2015, integrando o Grupo de Construção Mecânica (que engloba as áreas disciplinares de Mecânica Aplicada,

Resistência dos Materiais, Órgãos de Máquinas, Análise de Vibrações, Comportamento dos Materiais em Serviço, e Estruturas Mecânicas).

Previamente à atividade docente acima referenciada, ainda enquanto estudante da Licenciatura em Engenharia Mecânica da Universidade de Coimbra, foi Monitor no Grupo de Construções Mecânicas desta instituição de ensino superior, entre 1998 e 2000, sob orientação do Prof. José António Martins Ferreira.

Produção científica

Edição de livros e volumes de revistas com difusão internacional

B-2. Special Issue on Mechanical Behavior of High-Strength Low-Alloy Steels (2016). Metals. Guest Edited by Ricardo Branco and Filippo Berto, MDPI AG, Switzerland, ISSN 2075-4701.
URL: http://www.mdpi.com/journal/metals/special_issues/low_alloy_steels

B-1. Recent Tends in Fatigue Design (2014). Mechanical Engineering Theory and Applications, Edited by Ricardo Branco, Nova Science Publishers, USA, ISBN 978-61668-410-5.

Capítulos de livros publicados por editoras internacionais

C-05. R. Branco, F. V. Antunes (2013). A New Lecture Format Based on Software Developed in the Classroom to enhance Students' Performance. University Teaching and Faculty Development Research Compendium. Edited by Luis M. Villar-Angulo, Olga M. Alegre-de la Rosa, pages 133-142, USA, ISBN: 978-1-62257-516-9.
(O trabalho que deu origem a este capítulo de livro foi inicialmente publicado sob a referência D-21, tendo sido posteriormente escolhido pelo Editor para integrar esta publicação)

C-04. R. Branco, J. D. Costa, F. V. Antunes (2012). Multiaxial fatigue life prediction for lateral notched round bars made of 34CrNiMo6 high strength steel. Fatigue Crack Growth: Mechanisms, Behavior and Analysis, Edited by Ping Tang and Jim Leor Zhang, pages 273-292, USA, ISBN 978-1-62081-599-1.

C-03. R. Branco, F. V. Antunes, J. D. Costa (2011). Influence of Poisson's ratio on fatigue crack growth in round bars. Crack Growth: Rates, Prediction and Prevention, Edited by D.V. Kubair, pages 41-57, USA, ISBN 978-1-61470-799-8.

C-02. R. Branco, F. V. Antunes, J. A. Martins Ferreira, J.M. Silva (2011). Effect of residual stresses on crack shape of corner cracks at holes in nickel base superalloys. Superalloys: Production, Properties and Applications, Edited by Jeremy E. Watson, pages 1-24, USA, ISBN: 978-1-61209-536-3.

C-01. R. Branco, F. V. Antunes, J. D. Costa, FengPeng Yang, ZhenBang Kuang (2011). Determination of the Paris law constants from crack shapes on fracture surfaces in round bars, Advances in Mechanical Engineering Research. Volume 1, Edited by David E. Malach, Nova Science Publishers, pages 231-244, USA, ISBN: 978-1-61761-111-0

Artigos em revistas internacionais

D-36. R. Branco, J.D. Costa, F. Berto, F.V. Antunes (2017). Fatigue life assessment of notched round bars under multiaxial loading based on the total strain energy density approach. Theoretical and Applied Fracture Mechanics (in press).
DOI: http://dx.doi.org/10.1016/j.tafmec.2017.06.003

D-35. F.V. Antunes, R. Branco, P.A. Prates, L. Borrego (2016). Fatigue crack growth modelling based on CTOD for the 7050-T6 alloy. Fatigue and Fracture of Engineering Materials and Structures
DOI: http://dx.doi.org/10.1111/ffe.12582

D-34. J.P. Bastista, F.V. Antunes, L. Correia, R. Branco (2016). Effect of single overloads on plasticity induced crack closure. Theoretical and Applied Fracture Mechanics.
DOI: http://dx.doi.org/10.1016/j.tafmec.2016.12.001

D-33. F.V. Antunes, S. Mesquita, R. Branco, D. Camas (2016). A numerical analysis of CTOD in constant amplitude fatigue crack growth. Theoretical and Applied Fracture Mechanics 85, 45-55
DOI: http://dx.doi.org/10.1016/j.tafmec.2016.08.015

D-32. R. Maia, R. Branco, F.V. Antunes, M.C. Oliveira, A. Kotousov (2016). Three-dimensional computational analysis of stress state transition in through-cracked plates. Mathematics in Computer Science 10, 343-352.
DOI: http://dx.doi.org/10.1007/s11786-016-0267-z

D-31. F. V. Antunes, F. Castanheira, R. Branco (2016). A numerical analysis of the mechanisms behind plasticity induced crack closure: application to variable amplitude loadings. International Journal of Fatigue 89, 43-52.
DOI: http://dx.doi.org/10.1016/j.ijfatigue.2015.12.006

D-30. F.V. Antunes, R. Branco, L. Correia, A.L. Ramalho, S. Mesquita (2016). Numerical validation of crack closure concept using non-linear crack tip parameters. Procedia Structural Integrity, Volume 1, pages 90-97.
DOI: http://doi.org/10.1016/j.prostr.2016.02.013

D-35. R. Branco, J.D. Costa, F.V. Antunes, Sandra Perdigão (2016). Monotonic and cyclic behaviour of DIN 34CrNiMo6 martensitic steel. Metals 6(5), 98, pages 1-14.
DOI: http://dx.doi.org/10.3390/met6050098

D-28. Z. He, A. Kotousov, F. Berto, R. Branco (2016). A brief review of three-dimensional effects near

crack front. Physical Mesomechanics, Volume 19, pages 6-20.
DOI: http://dx.doi.org/10.1134/S1029959916010021

D-27. F. V. Antunes, L. Correia, D. Camas, R. Branco (2015). Effect of compressive loads on plasticity induced crack closure. Theoretical and Applied Fracture Mechanics, Volume 80, pages 193-204.
DOI: http://dx.doi.org/10.1016/j.tafmec.2015.09.001

D-26. F. V. Antunes, D. Camas, L. Correia, R. Branco (2015). Finite element meshes for optimal modelling of plasticity induced crack closure. Engineering Fracture Mechanics, Volume 142, 184-200.
DOI: http://dx.doi.org/10.1016/j.engfracmech.2015.06.007

D-25. R. Branco, F.V. Antunes, J.D. Costa (2015). A review on 3D-FE adaptive remeshing techniques for crack growth modelling. Engineering Fracture Mechanics, Volume 41, 170-195.
DOI: http://dx.doi.org/10.1016/j.engfracmech.2015.05.023

D-24. F. V. Antunes, Ricardo Branco, L. Correia, A. Ramalho (2015). A numerical study of non-linear crack tip parameters. Frattura de Integrità Strutturale, Volume 33, pages 199-208.DOI: http://dx.doi.org/10.3221/IGF-ESIS.33.25

D-23. F. V. Antunes, A. G. Chegini, R. Branco, D. Camas (2015). A numerical study of plasticity induced crack closure under plane strain conditions. International Journal of Fatigue, Volume 71, pages 75-86.
DOI: http://dx.doi.org/10.1016/j.ijfatigue.2014.03

D-22. F. V. Antunes, T. Sousa, R. Branco, L. Correia (2015). Effect of crack closure on non-linear crack tip parameter. International Journal of Fatigue, Volume 71, pages 53-63.
DOI: http://dx.doi.org/10.1016/j.ijfatigue.2014.10.001

D-21. Zhuang He, Andrei Kotousov, Ricardo Branco (2014). A simplified method for the evaluation of fatigue crack front shapes under mode I loading. International Journal of Fracture, Volume 188, pages 203-211.
DOI: http://dx.doi.org/10.1007/s10704-014-9955-3

D-20. R. Branco, J.D. Costa, F.V. Antunes (2014). Fatigue behaviour and life prediction of lateral notched round bars under bending-torsion loading. Engineering Fracture Mechanics, Volume 199, pages 66-84.
DOI: http://dx.doi.org/10.1016/j.engfracmech.2014.02.009

D-19. F. V. Antunes, A. G. Chegini, L. Correia, R. Branco (2014). Numerical study of contact forces for crack closure analysis. International Journal of Solids and Structures, Volume 51, pages 1330-1339.
DOI: http://dx.doi.org/10.1016/j.ijsolstr.2013.12.026

D-18. R. Branco, F.V. Antunes, J.D. Costa (2014). Notched M(T) specimen for plane strain studies. International Journal of Fatigue 58, 28-39.
DOI: http://dx.doi.org/10.1016/j.ijfatigue.2013.01.011

D-17. R. Branco, F.V. Antunes, J.D. Costa (2014). Lynx: A user-friendly computer application for simulating fatigue growth of planar cracks using FEM. Computer Applications in Engineering Education, Volume 22, Issue 3, pages 375 - 569.
DOI: http://dx.doi.org/10.1002/cae.20578

D-16. R. Branco, J.D. Costa, F.V. Antunes, P. Bento (2014). Comparative analysis of fatigue life predictions in lateral notched round bars under multiaxial loading. Technische Mechanik, Volume 34, Issue 3-4, pages 128-141.

D-15. R. Branco, J.D. Costa, F.V. Antunes (2014). Influence of errors in Young's modulus on fatigue life predictions of notched round bars under bending-torsion loading. Recent Patents on Mechanical Engineering, Volume 7, pages 63-76.
DOI: http://dx.doi.org/10.2174/2212797606666140107233109

D-14. R. Branco, F.V. Antunes, J.D. Costa (2013). Extent of the surface region in notched Middle Cracked Tension specimens. Key Engineering Materials. Special Issue on Advances in Crack Growth Modelling. Edited by Ferri Aliabadi and Pihua Wen, Volume 560, pages 107-127.
DOI: http://dx.doi.org/10.4028/www.scientific.net/KEM.560.107

D-13. R. Branco, F.V. Antunes, J.D. Costa, FengPeng Yang, ZhenBang Kuang (2012). Determination of the Paris law constants in round bars from beach marks on fracture surfaces. Engineering Fracture Mechanics, Volume 96, pages 96-106.
DOI: http://dx.doi.org/10.1016/j.engfracmech.2012.07.009

D-12. R. Branco, J.D. Costa, F.V. Antunes (2012). Low-cycle fatigue behaviour of 34CrNiMo6 high strength steel. Theoretical and Applied Fracture Mechanics, Volume 58, pages 28-34.
DOI: http://dx.doi.org/10.1016/j.tafmec.2012.02.004

D-11. R. Branco, F.V. Antunes, L.H. Ricardo, J.D. Costa (2012). Extent of surface regions near corner points of notched cracked bodies subjected to mode-I loading. Finite Elements in Analysis & Design, Volume 50, pages 147-160.
DOI: http://dx.doi.org/10.1016/j.finel.2011.09.006

D-10. F.V. Antunes, R. Branco, D. M. Rodrigues (2011). Plasticity induced crack closure under plane strain conditions. Key Engineering Materials, Volume 465, pages 548-551.
DOI: http://dx.doi.org/10.4028/www.scientific.net/KEM.465.548

D-09. R. Branco, J.M. Silva, V. Infante, F.V. Antunes, F. Ferreira (2010). Using a standard specimen for crack propagation under plain strain conditions. International Journal of Structural Integrity, Volume 1, pages 332-343.

DOI: http://dx.doi.org/10.1108/17579861011099169

D-08. F.V. Antunes, R. Branco, J.D. Costa, D.M. Rodrigues (2010). Plasticity induced crack closure in Middle-Crack Tension specimen: numerical versus experimental. Fatigue & Fracture of Engineering Materials & Structures, Volume 33, pages 673-686.
DOI: http://dx.doi.org/10.1111/j.1460-2695.2010.01479.x

D-07. F.V. Antunes, D. Rodrigues, R. Branco (2010). An analytical model of plasticity induced crack closure. Procedia Engineering, Volume 2, pages 1005-1014.
DOI: http://dx.doi.org/10.1016/j.proeng.2010.03.109

D-06. D.M. Rodrigues, F.V. Antunes, R. Branco (2010). Influence of material parameters on plasticity induced crack closure. Key Engineering Materials, Advances in Fracture Mechanics VIII, Volumes 417-418, pages 113-116.
DOI: http://dx.doi.org/10.4028/www.scientific.net/KEM.417-418.113

D-05. R. Branco, F.V. Antunes (2010). Enhancing students' interest employing a new lecture format based on software development in the classroom. International Journal of University Teaching and Faculty Development, Volume 1, pages 133-142.

D-04. R. Branco, F.V. Antunes, J.A. Martins Ferreira, J.M. Silva (2009). Determination of Paris Law constants with a reverse engineering technique. Engineering Failure Analysis, Volume 16, pages 631-638.
DOI: http://dx.doi.org/10.1016/j.engfailanal.2008.02.004

D-03. R. Branco, F. V. Antunes, R. F. Martins (2008). Modelling fatigue crack propagation in CT specimens. Fatigue & Fracture of Engineering Materials & Structures 31, 452-465.
DOI: http://dx.doi.org/10.1111/j.1460-2695.2008.01241.x

D-02. R. Branco, D. Rodrigues, F.V. Antunes (2008). Influence of through-thickness crack shape on plasticity induced crack closure. Fatigue & Fracture of Engineering Materials & Structures 31, 209-220.
DOI: http://dx.doi.org/10.1111/j.1460-2695.2008.01216.x

D-01. R. Branco, F.V. Antunes (2008). Finite element modelling and analysis of crack shape evolution in mode-I fatigue Middle-Cracked Tension specimens. Engineering Fracture Mechanics 75, 3020-3037.
DOI: http://dx.doi.org/10.1016/j.engfracmech.2007.12.012

Artigos em atas de conferências internacionais

E-17. B. Zakavi, A. Kotousov, A. Khanna, R. Branco (2017). On Evaluation of Fatigue Crack Front

Shapes. 9th Australasian Congress on Applied Mechanics (ACAM9), Sydney, Australia, 27-29 November 2017.

E-16. B. Zakavi, A. Kotousov, R. Branco (2017). Effect of Crack Front Shapes on Fatigue Life. 35th Conference and the 29th Symposium of the International Committee on Aeronautical Fatigue and Structural Integrity (ICAF), Nagoya, Japan, 5-9 June 2017.

E-15. Ricardo Branco, J.D. Costa, Filippo Berto, F.V. Antunes (2017). Influence of loading ratio and loading orientation on fatigue behaviour in lateral notched round bars under bending-torsion. International Symposium on Notch Fracture, Santander, Spain, 29-31 March 2017, Pages 1-8, ISBN 978-84-617-9611-3.

E-14. Z. He, A. Kotousov, R. Branco (2015). Evaluation of fatigue crack front shape for a specimen with finite thickness. 4th International Conference on Advances in Mechanics Engineering (ICAME 2015), 20-21 July, Madrid, Spain. MATEC Web of Conferences 28, 01004.
DOI: http://dx.doi.org/10.1051/matecconf/20152801004

E-13. R. Branco, J.D. Costa, F.V. Antunes (2014). Influence of loading pattern in fatigue life for notched round bars subjected to bending-torsion. 2nd International Conference on Fatigue Design and Material Defects, 11-13 June, Paris, France. MATEC Web of Conferences 12, 08004.
DOI: http://dx.doi.org/10.1051/matecconf/20141208004

E-12. F.V. Antunes, A.G. Chegini, R. Branco, D. Camas (2014). Numerical analysis of plasticity induced crack closure under plane strain states. 31st Meeting of Spanish Group. San Lorenzo del Escorial, 2-4 April [in Spanish].

E-11. R. Branco, J.D. Costa, F.V. Antunes, L. Roseiro (2013). Fatigue life prediction for notched round bars under multiaxial loading. International Conference on Engineering, 27-29 November, Covilhã, Portugal.

E-10. R. Branco, F.V. Antunes, JD. Costa (2012). Lynx: New Tool to Model Mode-I Fatigue Crack Propagation. Proceedings of 4th International Conference on Crack Paths (CP2012), pages 735-742, 19-21 September, Gaeta, Italy, ISBN: 9788895940441.

E-09. R. Branco, F.V. Antunes, J.D. Costa (2011). Extent of surface region near corner points. Proceedings of 28th Meeting of Spanish Group of Fracture, Volume 26, pages 637-642, 6-8 April, Gijon, Spain.

E-08. R. Branco, F.V. Antunes, J.D. Costa (2009). Influence of elastic constants on crack shape evolution in axles. Proceedings of 3rd International Conference on Integrity Reliability and Failure (IRF'2009), University of Porto, FEUP, 20-24 July, Portugal.

E-07. R. Branco, F.V. Antunes, J.D. Costa, J. Barbosa (2009). Numerical modelling of fatigue crack growth in shafts under tension and bending. Proceedings of 3rd International Conference on Integrity Reliability and Failure (IRF'2009), University of Porto, FEUP, 20-24 July, Portugal.

E-06. R. Branco, F.V. Antunes (2008). Educational software developed by students in classroom environment. Proceedings of 3rd Iberian Conference on Systems and Technology Information, Volume 1, pages 93-103, University of Vigo, 19-21 June, Orense Campus, Orense, Spain.

E-05. R. Branco, F.V. Antunes (2007). Educational engineering software for Statics. Proceedings of 2nd Iberian Conference on Systems and Technology Information, University Fernando Pessoa, 21-23 June, Porto, Portugal.

E-04. R. Branco, F.V. Antunes, J.A. Martins Ferreira, J.M. Silva (2007). Automatic fatigue crack growth in nickel base supperalloy at elevated temperature. Proceedings of 6th Engineering Integrity Society International Conference on Durability and Fatigue, 26-28 March, Queens' College, Cambridge, United Kingdom, 2007.

E-03. R. Branco, F.V. Antunes, J.A. Martins Ferreira, J.M. Silva (2007). Determination of Paris Law constants with a reverse engineering technique. Proceedings of 24th Meeting of Spanish Group of Facture, 21-23 March, Burgos, Spain.

E-02. R. Branco, F.V. Antunes, R.F. Martins (2006). Modelling fatigue crack propagation in CT specimens. Proceedings of 5th International Conference on Mechanics and Materials in Design, Faculty of Engineering, University of Porto, 24-26 July, Portugal.

E-01. R. Branco, F.V. Antunes (2005). Numerical study of crack shape evolution in MT geometry. Proceedings of 22th Meeting of Spanish Group of Facture, 9-11 March, Volume 22, pages 35-40, Almagro, Spain.

Artigos em atas de conferências nacionais

F-08. A. Serra, R. Branco, J.D. Costa, F.V. Antunes (2012). Fatigue behaviour of lateral notched round bars under torsion-bending loading. Proceedings of 13th Portuguese Conference on Fracture, 2-3 February, pages 107-112, Coimbra, Portugal.

F-07. L.C.H. Ricardo, R. Branco, F.V. Antunes (2012). A review on stress intensity threshold factor, ΔK_{th}, and the contribution for development of material properties. Proceedings of 13th Portuguese Conference on Fracture, February, 2-3 February, pages 235-239, Coimbra, Portugal.

F-06. R. Branco, F. V. Antunes, D. M. Rodrigues (2011). Effect of finite element mesh on plasticity induced crack closure, Congress on Numerical Methods in Engineering, 14-17 June, Coimbra, Portugal, pages 1-15.

F-05. R. Branco, F.V. Antunes, J.D. Costa, D. Rodrigues (2008). Validation of numerical predictions of plasticity induced crack closure. Proceedings of 11th Portuguese Conference on Fracture, New University of Lisbon, 22-24 February, Portugal.

F-04. R. Branco, F.V. Antunes (2006). Modelling transient and stable phases of crack shape evolution.

Proceedings of 10th Portuguese Conference on Fracture, Portuguese Society of Materials, University of Minho, 22-24 February, Guimarães, Portugal.

F-03. R. Branco, F.V. Antunes (2004). Utilização de provetes no estudo do comportamento à fratura e fadiga. 4as Jornadas Politécnicas de Engenharia, ISEP, 17-18 de novembro, Porto, pages 609-620, Portugal.

F-02. R. Branco, F.V. Antunes (2004). Otimização do estudo numérico da evolução da forma da fenda. VIII Congresso Nacional de Mecânica Aplicada e Computacional, Associação Portuguesa de Mecânica Teórica (APMTAC), 31 de maio a 2 de junho, Lisboa, Portugal.

F-01. R. Branco, F.V. Antunes (2004). Optimisation of the numerical study of crack shape evolution. Proceedings of 9th Portuguese Conference on Fracture, Portuguese Society of Materials, 18-20 February, Setúbal, pages 9-16, Portugal.

Comunicações em conferências de trabalhos de investigação em que participou

G-25. Ricardo Branco, J.D. Costa, Filippo Berto, F.V. Antunes (2017). Influence of loading ratio and loading orientation on fatigue behaviour in lateral notched round bars under bending-torsion. International Symposium on Notch Fracture, Santander, Spain, 29-31 March 2017.

G-24. Ricardo Branco, J.D. Costa, L.P. Borrego, J.A. Martins Ferreira, F.V. Antunes (2016). Cyclic plastic deformation behaviour of 7050 aluminium alloy. 15th Portuguese Conference on Fracture, PCF 2016, 10-12 February 2016, Paço de Arcos, Portugal.

G-23. FV Antunes, Ricardo Branco, L. Correia, A.L. Ramalho, S. Mesquita (2016). Numerical validation of crack closure concept using non-linear crack tip parameters. 15th Portuguese Conference on Fracture, PCF 2016, 10-12 February 2016, Paço de Arcos, Portugal.

G-22. Z. He, A. Kotousov, R. Branco (2015). Evaluation of fatigue crack front shape for a specimen with finite thickness. 4th International Conference on Advances in Mechanics Engineering (ICAME 2015), 20-21 July, Madrid, Spain.

G-21. F. V. Antunes, Ricardo Branco, L. Correia, A. Ramalho (2015). A numerical study of non-linear crack tip parameters. Characterisation of Crack Tip Stress Fields, 20-22 April, Urbino, Italy.

G-20 R. Branco, J.D. Costa, F.V. Antunes (2014). Influence of loading pattern in fatigue life for notched round bars subjected to bending-torsion. 2nd International conference on Fatigue Design and Material Defects, 11-13 June, Paris. France.

G-19. F.V. Antunes, A.G. Chegini, R. Branco, D. Camas (2014). Numerical analysis of plasticity induced crack closure under plane strain states. 31st Meeting of Spanish Group. San Lorenzo del Escorial, 2-4 April [in Spanish].

G-18. R. Branco, J.D. Costa, F.V. Antunes, L. Roseiro (2013). Fatigue life prediction for notched round bars under multiaxial loading. International Conference on Engineering, 27-29 November,

Covilhã, Portugal.

G-17. R. Branco, F.V. Antunes, J.D. Costa (2012). Lynx: new tool to model Mode-I fatigue crack propagation. Proceedings of 4th International Conference on Crack Paths (CP2012), pages 735-742, 19-21 September, Gaeta, Italy, ISBN: 9788895940441.

G-16. A. Serra, R. Branco, J.D. Costa, F.V. Antunes (2012). Fatigue behaviour of lateral notched round bars under torsion-bending loading. 13th Portuguese Conference on Fracture, 2-3 February, Coimbra, Portugal.

G-15. R. Branco, F. V. Antunes, D. M. Rodrigues (2011). Effect of finite element mesh on plasticity induced crack closure, Congress on Numerical Methods in Engineering, 14-17 June, Coimbra, Portugal, pages 1-15.

G-14. R. Branco, F.V. Antunes, J.D. Costa (2011). Extent of surface region near corner points. Proceedings of 28th Meeting of Spanish Group of Fracture, Volume 26, pages 637-642, 6-8 April, Gijón, Spain.

G-13. F.V. Antunes, D. Rodrigues, R. Branco (2010). An analytical model of plasticity induced crack closure. 10th International Fatigue Congress, Prague, 6-11 June, Czech Republic.

G-12. R. Branco, F.V. Antunes, D. Rodrigues (2010). Plasticity induced crack closure under plane strain conditions. 6th International Conference on Materials Structure & Micromechanics of Fracture, Faculty of Mechanical Engineering, Brno University of Technology, Brno, Czech Republic, 28-30 June.

G-11. R. Branco, F.V. Antunes, J.D. Costa (2009). Influence of elastic constants on crack shape evolution in axles. Proceedings of 3rd International Conference on Integrity Reliability and Failure (IRF'2009), University of Porto, FEUP, Portugal, 20-24 July.

G-10. R. Branco, F.V. Antunes, J.D. Costa, J. Barbosa (2009). Numerical modelling of fatigue crack growth in shafts under tension and bending. Proceedings of 3rd International Conference on Integrity Reliability and Failure (IRF'2009), University of Porto, FEUP, Portugal, 20-24 July.

G-09. R. Branco, F.V. Antunes (2008). Educational software developed by students in classroom environment. 3rd Iberian Conference on Systems and Technology Information, University of Vigo, 19-21 June, Orense Campus, Orense, Spain.

G-08. R. Branco, F.V. Antunes, J.D. Costa, D. Rodrigues (2008). Validation of numerical predictions of plasticity induced crack closure. Proceedings of 11th Portuguese Conference on Fracture, New University of Lisbon, 22-24 February, Portugal.

G-07. R. Branco, F.V. Antunes (2007). Educational engineering software for Statics. 2nd Iberian Conference on Systems and Technology Information, University Fernando Pessoa, 21-23 June, Porto, Portugal.

G-06. R. Branco, F.V. Antunes, J.A. Martins Ferreira, J.M. Silva (2007). Determination of Paris Law constants with a reverse engineering technique. Proceedings of 24th Meeting of Spanish Group of Fracture, 21-23 March, Burgos, Spain.

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L-13. Membro do Comité Científico do *7th Annual Congress on Materials Research and Technology,* que decorreu em Berlim, Alemanha, 20-21 fevereiro, 2017.

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L-09. Membro do *Technical Program Committee* da *3rd International Conference on Material Engineering and Application*, Changsha, Hunan, China, 12-13 novembro, 2016.

L-08. Membro do *Technical Program Committee* da *Advanced Manufacture Technology and Industrial Application* (AMTIA2016). Thailand, Chiang Mai, 25-27 setembro, 2016

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Júri de provas académicas conducentes ao grau de mestre

O-16. Membro do Júri, na qualidade de orientador, das provas públicas de Mestrado em Engenharia Mecânica, na especialidade de Construção e Manutenção de Equipamentos Mecânicos, de Pedro Rafael Lages Alves, com dissertação intitulada "Desenvolvimento de ferramenta numérica para estudo de propagação de fendas por fadiga usando software comercial de elementos finitos", apresentada no Instituto Superior de Engenharia de Coimbra do Instituto Politécnico de Coimbra para a obtenção do grau de Mestre.
Data de realização das provas: 13-07-2016 (ano letivo 2015/16).

O-15. Membro do Júri, na qualidade de orientador, das provas públicas de Mestrado em Engenharia Mecânica, na especialidade de Projeto e Produção, de António José Vieira, com dissertação intitulada "Previsão de vida à fadiga em peças entalhadas sujeitas a carregamentos multiaxiais" apresentada na Faculdade de Ciências e Tecnologia da Universidade de Coimbra para a obtenção do grau de Mestre.
Data de realização das provas: 23-02-2017 (ano letivo 2016/17).

O-14. Membro do Júri, na qualidade de presidente, das provas públicas de Mestrado em Engenharia Mecânica, na especialidade de Projeto e Produção, de Rafael Ferreira Simões, com dissertação intitulada "Análise da Propagação de Fendas por Fadiga com Base no CTOD: Efeito dos Parâmetros Numéricos" apresentada na Faculdade de Ciências e Tecnologia da Universidade de Coimbra para a obtenção do grau de Mestre.
Data de realização das provas: 23-02-2017 (ano letivo 2016/17).

O-13. Arguente das provas públicas de Mestrado em Engenharia Mecânica, na especialidade de Projeto e Produção, de Samuel Morgado Serrano, com dissertação intitulada "Análise da propagação de fendas por fadiga baseada no CTOD para a liga 2050-T8 AA" apresentada na Faculdade de Ciências e Tecnologia da Universidade de Coimbra para a obtenção do grau de Mestre.
Data de realização das provas: 23-02-2017 (ano letivo 2016/17).

O-12. Membro do Júri, na qualidade de orientador, das provas públicas de Mestrado em Engenharia Mecânica, na especialidade de Projeto e Produção, de Filipe Alexandre Zabelo Duarte, com dissertação intitulada "Determinação da extensão da camada superficial em geometrias com

entalhes severos" apresentada na Faculdade de Ciências e Tecnologia da Universidade de Coimbra para a obtenção do grau de Mestre.

Data de realização das provas: 23-09-2016 (ano letivo 2015/16).

O-11. Arguente das provas públicas de Mestrado em Engenharia Mecânica, na especialidade de Projeto e Produção, de Pedro Manuel Bastos Loureiro, com dissertação intitulada "Propagação de fendas por fadiga: efeitos de subcargas" apresentada na Faculdade de Ciências e Tecnologia da Universidade de Coimbra para a obtenção do grau de Mestre.

Data de realização das provas: 21-09-2016 (ano letivo 2015/16).

O-10. Membro do Júri, na qualidade de orientador, das provas públicas de Mestrado em Engenharia Mecânica, na especialidade de Projeto e Produção, de André Lopes Almeida, com dissertação intitulada "Estudo numérico de propagação de fendas por fadiga em juntas soldadas em T" apresentada na Faculdade de Ciências e Tecnologia da Universidade de Coimbra para a obtenção do grau de Mestre.

Data de realização das provas: 20-07-2016 (ano letivo 2015/16).

O-09. Membro do Júri, na qualidade de orientador, das provas públicas de Mestrado em Engenharia Mecânica, na especialidade de Projeto e Produção, de Hugo Jesus Marques, com dissertação intitulada "Desenvolvimento de ferramenta numérica para propagação de fendas por fadiga usando software comercial" apresentada na Faculdade de Ciências e Tecnologia da Universidade de Coimbra para a obtenção do grau de Mestre.

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O-08. Membro do Júri, na qualidade de orientador, das provas públicas de Mestrado em Engenharia Mecânica, de Jorge Filipe Pereira da Cunha, com relatório de projeto intitulado "Desenvolvimento de um contentor enterrado para resíduos sólidos urbanos" apresentada no Instituto Superior de Engenharia de Coimbra do Instituto Politécnico de Coimbra para a obtenção do grau de Mestre.

Data de realização das provas: 27-06-2016 (ano letivo 2014/15).

O-07. Membro do Júri, na qualidade de orientador, das provas públicas de Mestrado em Engenharia Mecânica, de Sandra Maria Gonçalves Perdigão, com dissertação intitulada "Extensão da vida à fadiga utilizando sobrecargas" apresentada no Instituto Superior de Engenharia de Coimbra do Instituto Politécnico de Coimbra para a obtenção do grau de Mestre.

Data de realização das provas: 27-06-2016 (ano letivo 2014/15).

O-06. Arguente das provas públicas de Mestrado em Engenharia Mecânica, na especialidade de Projeto e Produção, de Salomé Mesquita Rodrigues, com dissertação intitulada "Propagação de fendas por fadiga: efeitos de subcargas" apresentada na Faculdade de Ciências e Tecnologia da Universidade de Coimbra para a obtenção do grau de Mestre.

Data de realização das provas: 24-02-2016 (ano letivo 2015/16).

O-05. Arguente das provas públicas de Mestrado em Engenharia Mecânica, na especialidade de Projeto e Produção, de Luís Filipe Ribeiro Paiva, com dissertação intitulada "Propagação de fendas por fadiga: Efeitos de subcargas" apresentada na Faculdade de Ciências e Tecnologia da Universidade

de Coimbra para a obtenção do grau de Mestre.

Data de realização das provas: 16-09-2015 (ano letivo 2014/15).

O-04. Membro do Júri, na qualidade de orientador, das provas públicas de Mestrado em Engenharia Mecânica, na especialidade de Projeto e Produção, de Rúben Gomes Maia, com dissertação intitulada "Determinação da extensão da camada superficial em geometrias planas" apresentada na Faculdade de Ciências e Tecnologia da Universidade de Coimbra para a obtenção do grau de Mestre.

Data de realização das provas: 21-07-2015 (ano letivo 2014/15).

O-03. Arguente das provas públicas de Mestrado em Equipamentos e Sistemas Mecânicos, de Cláudia Patrícia Soares Lopes, com relatório intitulado "Ações para melhoria do processo produtivo de uma fábrica de MDF", apresentado no Departamento de Engenharia Mecânica do Instituto Superior de Engenharia de Coimbra, do Instituto Politécnico de Coimbra para a obtenção do grau de Mestre.

Data de realização das provas: 18-06-2015 (ano letivo 2014/15).

O-02. Arguente nas provas públicas de Mestrado em Engenharia Mecânica, na especialidade de Projeto e Produção, de Tiago Daniel Brás de Sousa, com dissertação intitulada "Propagação de fendas por fadiga: Influência do contacto nos parâmetros de extremidade de fenda", apresentada na Faculdade de Ciências e Tecnologia da Universidade de Coimbra para a obtenção do grau de Mestre.

Data de realização das provas: 02-07-2014 (ano letivo 2013/14).

O-01. Arguente nas provas públicas de Mestrado em Engenharia Mecânica, na especialidade de Projeto e Produção, de Gonçalo António Simões Marques, com dissertação intitulada "Efeito Transiente na Análise Numérica de Fecho de Fenda Induzido por deformação plástica", apresentada na Faculdade de Ciências e Tecnologia da Universidade de Coimbra para a obtenção do grau de Mestre.

Data de realização das provas: 16-09-2013 (ano letivo 2012/13).

Júri de outras provas académicas

Oa-6. Arguente nas provas públicas de defesa de relatório da unidade curricular de Projeto da Licenciatura em Engenharia Mecânica, do Instituto Superior de Engenharia de Coimbra, do Instituto Politécnico de Coimbra de Josélito Gaspar e Tiago Madaleno, intitulado "Triturador de material reciclável: metal e plástico".

Data de realização das provas: 25-09-2015 (ano letivo 2014/15).

Oa-5. Arguente nas provas públicas de defesa de relatório da unidade curricular de Projeto da Licenciatura em Engenharia Mecânica, do Instituto Superior de Engenharia de Coimbra, do Instituto Politécnico de Coimbra de Marco Ferreira, Pedro Cordeiro e Ricardo Deus, intitulado "Desenvolvimento de dispositivos de auxílio à prática de enfermagem".

Data de realização das provas: 17-07-2015 (ano letivo 2014/15).

Oa-4. Arguente nas provas públicas de defesa de relatório da unidade curricular de Projeto da Licenciatura em Engenharia Mecânica, do Instituto Superior de Engenharia de Coimbra, do Instituto Politécnico de Coimbra de André Brandão e Artur Pombo, intitulado "Kit para andarilho simples".

Data de realização das provas: 16-09-2014 (ano letivo 2013/14).

Oa-3. Arguente nas provas públicas de defesa de relatório da unidade curricular de Projeto da Licenciatura em Engenharia Mecânica, do Instituto Superior de Engenharia de Coimbra, do Instituto Politécnico de Coimbra de Dimtri Stepanov, José Carlos Sousa e Luís Martins, intitulado "Freeform fabrication".

Data de realização das provas: 20-09-2013 (ano letivo 2012/13).

Oa-2. Arguente nas provas públicas de defesa de relatório da unidade curricular de Projeto da Licenciatura em Engenharia Mecânica, do Instituto Superior de Engenharia de Coimbra, do Instituto Politécnico de Coimbra de Daniel Gonçalves, intitulado "Skate Fisioterapêutico".

Data de realização das provas: 01-10-2013 (ano letivo 2012/13).

Oa-1. Arguente nas provas públicas de defesa de relatório da unidade curricular de Projeto da Licenciatura em Engenharia Mecânica, do Instituto Superior de Engenharia de Coimbra, do Instituto Politécnico de Coimbra, de André Gomes, David Peixe e Hélder Ruel, intitulado "Conversor de Energia de Ondas".

Data de realização das provas: 29-09-2011 (ano letivo 2010/11).

Membro de painéis de avaliação

Ob-2. Membro do painel de avaliação da Fundação para a Ciência e Tecnologia (FCT) das candidaturas apresentadas no âmbito de concursos da Cooperação Bilateral, Convénio entre a Portugal e Marrocos, FCT-CNRST 2017-2018.

Ob-1. Membro do painel de avaliação da Fundação para a Ciência e Tecnologia (FCT) das candidaturas apresentadas no âmbito de concursos da Cooperação Bilateral, Programa Pessoa 2017-2018.

Coimbra, 7 de junho de 2017

(Ricardo Nuno Madeira Soares Branco)