

**Paulo M. S. T. de Castro**  
**Report 2021**

**Book**

- Roberto Citarella, Paulo M. S. T. de Castro, Angelo Maligno, Eds., ‘Fatigue and Fracture Behaviour of Additively Manufactured Mechanical Components’, MDPI, 2021. ISBN 978-3-03943-665-1 (Hbk). ISBN 978-3-03943-666-8 (PDF)

**Papers**

- Beatriz Henriques, Mariana Carvalho, Sérgio M. O. Tavares, Paulo M. S. T. de Castro, ‘A Comparison of Safety Factor Values for Soderberg and DIN 743 Fatigue Analyses’, *U.Porto Journal of Engineering*, vol. 7 no. 2 (2021), pp.11-21
- Luís Ramalho, Raul D. S. G. Campilho, Jorge Belinha, Paulo M. S. T. de Castro, ‘Parametric Study of Fatigue Crack Growth in a Finite Plate’, *U.Porto Journal of Engineering*, vol. 7 no. 2 (2021), pp.22-30
- Paulo M. S. Tavares de Castro, ‘Remarks on 40+ Years of Mechanical Engineering Teaching’, *Journal on Teaching Engineering*, vol.1, no.1 (2021), pp.2-39
- Nuno Graça, Paulo M. S. T. de Castro, ‘Fatigue behaviour of a spring: a case study’, *MATEC Web of Conferences* vol. 349, 04009 (2021)  
<https://doi.org/10.1051/mateconf/202134904009>

**Presentations**

- Nuno M. Gonçalves da Graça, Paulo M. S. Tavares de Castro, ‘Fatigue of mechanical components: a case study’, IJUP 2021, 5-7 May 2021 (distinguished presentation award)
- Nuno M. Gonçalves da Graça, Paulo M. S. Tavares de Castro, ‘Fatigue behaviour of a spring: a case study’, 6th International Virtual Conference of Engineering Against Failure - ICEAF, 23-25 June 2021

**Invited seminars**

Paulo M. S. T. de Castro, ‘Mixed mode fracture problems’, seminar, Università degli Studi di Salerno, 25 May 2021

**Other**

Paulo M. S. T. de Castro, ‘Cranfield, in the late seventies ...’, testimonial for the 30 years of Jorge dos Santos at Helmholtz-Zentrum.

### **Theses supervised**

- Luís Afonso Leal Silva, ‘Desenvolvimento e validação experimental de uma solução pavement energy harvesting para conversão de energia cinética de veículos em energia elétrica para aplicação em autoestradas’, supervised by Dr. Francisco Duarte (PAVNEXT) and co-supervised by P. T. de Castro, MIEM FEUP, 2021

### **Scientific committees of conferences, chairmanship**

#### *International Advisory Scientific Committee:*

- virtual 20th International Colloquium on Mechanical Fatigue of Metals, 15–17 September 2021 Wrocław, Poland,  
<http://icmfmx.pwr.edu.pl/organization>

#### *Scientific Committee*

- 25th Int Scientific Conference (online) Transport Means 2021: Sustainability: Research and Solutions, Kaunas, 6-8 October 2021  
<https://transportmeans.ktu.edu/>
- 12th EASN International Conference on ‘Innovation in Aviation & Space opening New Horizons’, Barcelona, Spain October 18-21, 2022. (co-organized by the EASN Association and the Universitat Politècnica de Catalunya - BarcelonaTech - UPC)
- 7th International Virtual Conference of Engineering Against Failure – ICEAF VII, Spetses, Greece, June 21 – 23, 2023.

#### *Chairmanship*

- 6th International Virtual Conference of Engineering Against Failure - ICEAF, 23-25 June 2021, Session 32: Assessment of fatigue behavior and crack growth analysis, Friday June 25.

### **Juris of theses**

- Luís Afonso Leal Silva, MIEM FEUP, 25 Feb 2021

### **Editorial boards**

#### *new membership:*

- **TransEngin - Journal of Civil Engineering and Transport** (Kazimierz Pulaski University of Technology and Humanities, Radom, Poland)  
<https://transengin.uniwersytetradom.pl/>  
<http://economic-research.pl/Journals/index.php/tren/about>  
27-2-2021

*invitation for new period:*

- ***International Journal of Structural Integrity***, email of Co-Editors-in-Chief José António Correia and Shun-Peng Zhu, August 1, 2021, reply of August 2, 2021

*reconfirmed:*

- 2021-12-07 email of O. Reed, Wiley - reconfirmed editorial board member for next period, ***Fatigue and Fracture of Engineering Materials and Structures***.

### **Service**

- 2021-03-15 CleanSky SciCom 2021-01 (on-line)
- 2021-06-14 CleanSky SciCom 2021-02 (on-line)
- 2021-09-13 CleanSky Short briefing on the CS2DP Revision and Bi-Annual Work Plan (2022-23)
- 2021-10-15 CleanSky SciCom meeting (partial attendance)
- Subscritor da proposta de Abílio de Jesus *et al.* para criação da divisão técnica da SPM relativa a Tecnologia e Processamento de Materiais, Julho 2021
- Member of Advisory Board (Conselho Consultivo) of TEMA – Universidade de Aveiro, 2021-2024.

### **Teaching**

Invited lectures to OM-II 2020-2021 students

- Welded joints
- Creep design

### **Academic panels**

Concurso edital U Aveiro CD-CTTI-118-ARH/2020, um lugar de Professor Auxiliar na área disciplinar de Engenharia Mecânica, subárea de Projecto Mecânico

- 1ª tele-reunião, 23 de Abril 2021
- 2ª tele-reunião, 28 de Maio 2021

### **On-line events attended**

- Academia das Ciências de Lisboa, sessions: Jan. 7, 14, 21; Feb. 11, 18, 25; March 11, 18, 25; April 8, 14, 15, 22, 29; May 6, 13, 20; June 17, 24; July 1, 8, 15, 22; Oct. 10, 21; Dec. 2, 16 (election Presid. and V-Presid).
- “BE OPEN meets OSCAR” - Open Science Collaboration Joint event, June 16, 2021.

- COTEC Innovation Summit 2021 - Industrial Ecosystems: Paths to Restauration, digital event, July 14-16, 2021; 14.<sup>a</sup> sessão Xperience 4.0 – ‘Sensorização e Análise Preditiva na Monitorização de Equipamento Industrial’, Oct. 1, 2021.
- *Fatigue and Fracture of Engineering Materials and Structures*, Editorial Board meeting, August 12, 2021.
- 2021 National Academy of Engineering (NAE) Annual Meeting Virtual, session of Oct. 3, 2021 (partial, non-member attendance).
- 5th EASN NCPs meeting, April, 4, 2021; 6th EASN NCPs meeting, Oct. 4, 2021 (partial attendance); 12th General Assembly of the EASN Association, October 6.
- IN CONFERENCE INEGI 2021 - Inspiring Industry Innovation, Oct. 21, 2021

**Other**

- EMAF 2021, 3 December 2021