



Conference Programme

Organization



Sponsors



Monday, 30 March 2026

Mon, 08:30-09:00	Registration	Auditório - INEGI - Floor 3
Mon, 09:00-09:15	Opening Session	Auditório - INEGI - Floor 3
Welcome Address Conference Co-Chairs		

Mon, 09:15-09.45	Keynote I	Auditório - INEGI - Floor 3
Structural Integrity Assessment of Biomedical Devices: Relevance and Challenges Ana M. Amaro Dep. Mech. Eng. University of Coimbra Chair: Pedro Moreira		

Mon, 9:45-10:45	Session 1	Auditório - INEGI - Floor 3
Topic: Structural Integrity Evaluation of Welded Structures: Damage Assessment, Fatigue Analysis, and NonDestructive Testing Chair: Ricardo Cláudio		
Ref:	Title and Author (s)	
#2	Enhancing Metal–Polymer Joining through Mechanical Interlocking Miguel A.R. Pereira, Rui M. Leal, Ivan Galvão, José D.M. Costa, Ana M. Amaro	
#3	Dissimilar Materials Joining Through Friction Stir Riveting Virgínia Infante, Francisco Dias, Arménio Correia	
#17	Mechanical Response of Aluminium–Polymer Friction Stir Composite Joints Under Different Strain Rates Rodrigo J. Coelho , Beatriz Silva, Arménio Correia, Ricardo Baptista, Virgínia Infante, Pedro M.G.P. Moreira, Daniel F.O. Braga, Fernando Moreira	
#34	3D Elasto-Plastic Simulation of Fatigue Crack Growth in Pure Titanium Using Non-Conforming Finite Element Meshes ER Sérgio, DM Neto, FV Antunes	

Mon, 10:45-11:15	Coffe-Break	Auditório - INEGI - Floor 3

Mon, 11:15-12:45	Session 2	Auditório - INEGI - Floor 3
Topic: Railway Structures and Components Chair: Virgina Infante		
Ref:	Title and Author (s)	

#24	Experimental Characterization and Fatigue Behaviour of Spot-Welded Joints for Railway Vehicle applications Abílio de Jesus , João Nuno Silva, Francisca Pereira, Miguel de Figueiredo, José A.F.O Correia, Laura M. M. Ribeiro
#10	Fatigue behaviour of steel for railway applications: Micro- to macro-scale characterisation António M.B.F.S. Mourão, José A.F.O. Correia, Cláudio S. Horas, Túlio N. Bittencourt, Abílio de Jesus
#6	Local Fatigue Assessment of a Y25 Railway Welded Bogie Frame Francisco Portela, Vasco Simões, João Nuno Silva, Ana Leonor Ribeiro, Paulo Mendes, Cláudio Horas, Pedro Montenegro, Ruben Santos, Abílio de Jesus
#23	A Global–Local Fatigue Assessment of a Railway Freight Wagon Welded Detail João Nuno Silva, Francisco Portela, Leonor Ribeiro, Vasco Simões, Cláudio S. Horas, Pedro Montenegro, José A.F.O Correia, Abílio de Jesus
#28	Fatigue Life Extension of Metallic Bridges: a general overview João Arrojado, José A. F. O. Correia, Diogo Ribeiro, Anna Rakoczy
#32	Influence of monotonic and cyclic material behavior on fatigue crack growth predictions under constant and variable amplitude loading D.M. Neto, E.R. Sérgio, F.V. Antunes

Mon, 12:45-14:15	Lunch	Restaurant - INEGI - Floor 1
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Mon, 14:15-16:00	Session 3	Auditório - INEGI - Floor 3
Topic: Mechanical performance of additive manufactured components Chair: Luís Reis		
Ref:	Title and Author (s)	
#33	Quantitative fractography and the fatigue crack propagation behaviour of DED'ed 18Ni300 Maraging steel Jorge Gil, Felipe Fiorentin, Fátima Vaz , Beatriz Silva , Ana Reis, Abílio de Jesus	
#15	Mechanical Behavior of Biocompatible Titanium alloys with Bulk and Porous Structure Produced by Powder Bed Fusion-Laser Beam Rúben Gomes, Maria J. Carmezim, Luís Reis, Rodolfo Batalha	
#20	Melt Pool Monitoring as an In-situ Defect Detection Method for AlSi10Mg Parts Produced by PBF LB/M Carla M. Ferreira, João Marques, Pedro Cardoso, Rodolfo Batalha, Ana Ferramacho, Luís Reis, Ricardo Cláudio	

#22	Effect of Printing Strategies on the Mechanical Performance of PLA and PLA/Kahili Ginger Bicomposites obtained by fused deposition modelling Tiago Antunes, Pedro Rendas, Ana Ferramacho, Ricardo Claudio, Célio G. Figueiredo-Pina
#19	Production of thin features by Additive Manufacturing S. Cravo, V. Duarte, R. F.Martins, R. Claudio
#4	Failure Analysis of an Aeronautical Component Produced by Metal Additive Manufacturing Tiago Alves, Pedro Pêcego, Paulo Moita, Aníbal Valido, Pedro Rendas, Susana Cravo, Rodolfo L. Batalha, Ana Ferramacho, Carla Ferreira, Luís Reis, Ricardo Cláudio
#16	Optimisation Models to Predict the SN curves of Ti10Ta alloy Obtained by Additive Manufacturing João Alves, Teresa Morgado, António M. Pereira, Manuel Pereira

Mon, 16:00-16:30	Coffe-Break	Auditório - INEGI - Floor 3
Sponsored by Gravimeta		

Mon, 16:30-18:15	Session 4	Auditório - INEGI - Floor 3
Topic: Fatigue behaviour of metallic alloys Chair: Luís Borrego		
Ref:	Title and Author (s)	
#29	Local fatigue modelling considering corrosion degradation effects J.A.F.O. Correia, G. Lesiuk, C.C. António, A. Jesus, L. Manuel	
#30	Probabilistic fatigue prediction of metals at variable amplitude loading based on the non-linear damage J.A.F.O. Correia, G. Lesiuk, C.C. António, A. Jesus, L. Manuel	
#31	Evaluating fatigue properties based on classical and hybrid estimation methods J.A.F.O. Correia, A. Peixoto, António M.B.F.S. Mourão, G. Lesiuk, C.C. António, A. Jesus, L. Manuel	
#18	Effect of thread geometry on the fatigue life of high-strength bolt steels Carlos F. C. Rebelo, Rita Dantas, Bruno Pedrosa, Rúben F. Santos, Gonçalo P. Cipriano, Afonso Gabriel, Daniela I. M. Azevedo, Beatriz F. A. Silva, José Correia	
#7	Multiaxial fatigue performance of S690 QL steel in HCF and VHCF regimes Rita Dantas, Gonçalo P. Cipriano, Ana Dantas, Felipe Fiorentin, José Correia, Abílio de Jesus	

#9	Statistical Fatigue Life Characterization of Additively Manufactured Maraging Steel F. Bumba, V. Anes, R. Batalha, P. Morais, L. Reis
#36	Obtaining fatigue properties of the Várzeas bridge steel using an optimization technique through estimation methods José António Correia, Arcílio Peixoto, Cláudio Horas, António Mourão, Abílio De Jesus, Carlos António, Grzegorz Lesiuk

Mon, 19:30	Dinner	Herdade 1980 - Mercado do Bolhão
<p>Localizado em: Mercado do Bolhão Endereço: R. Formosa 322, 4000-211 Porto</p>		

Tuesday, 31 March 2026

Tue, 09:00-09:30	Keynote II	Auditório - INEGI - Floor 3
Analysis and Prevention of Mechanical Failures in Industrial Equipment Rui F. Martins NOVA School of Science & Technology Chair: Abílio de Jesus		

Tue, 09:30-10:45	Session 5	Auditório - INEGI - Floor 3
Topic: Hydrogen embrittlement and environment effects in materials Chair: Fernando Antunes		
Ref:	Title and Author (s)	
#25	An Open-Source Phase Field Framework for Hydrogen Assisted Fatigue Crack Growth Shiyuan Yang, Roya Darabi, Abílio de Jesus	
#11	A Coupled Elastoplastic–Diffusion Damage Model for Predicting Hydrogen-Assisted Fracture Regimes Duarte Cachulo, Abilio M.P. de Jesus, Lucival Malcher, Robert Amaro	
#8	Influence of hydrogen embrittlement on the fatigue behaviour of 316L stainless steel TIG welded joints M. António, J.S. Jesus, L.P. Borrego, L.Vilhena, R. Branco, J. D.M. Costa and J.A.M. Ferreira	
#26	A novel specimen geometry to study the effect of environment on FCG FV Antunes, GL Gonzáles, J Jesus, ER Sérgio, F.A. Díaz, DM Neto	
#5	Phase Field Fracture and free energy formulations Roya Darabi, Abilio de Jesus, Ana Reis	

Tue, 10:45-11:15	Coffe-Break	Auditório - INEGI - Floor 3
Sponsored by Scansci & Instron		

Tue, 11.15-12:45	Session 6	Auditório - INEGI - Floor 3
Topic: Strucutral health monitoring Chair: Paulo Tavares		
Ref:	Title and Author (s)	

#12	Non-contact stereo-vision monitoring of a transformer enclosure Francisco Afonso, Hugo Mesquita, Carolina Francisco, João Nunes, Susana Dias, Pedro J. S. C. P. Sousa, Paulo J. Tavares, Pedro M. G. J. Moreira, Cassiano Linhares, André Branquinho
#1	Dynamic Mode I Fracture Testing of Aluminum Alloys Using a Modified SHPB System Tiago M.R.M.Domingues, João Reis, Daniela Azevedo, Mário Cunha, Daniel Braga, Pedro M.G.P. Moreira, Lucas Azevedo
#21	Digital Image Correlation as a Defect Assessment Technique for Thin Specimens Produced by PBF-LB/M João Marques, Susana Cravo, Valdemar Duarte, Carla M. Ferreira, Pedro Rendas, Aníbal Valido, Afonso Leite, Ana Ferramacho, Ricardo Cláudio
#13	A Novel Seven-Point Bending Method to Predict Equivalent Distributed Service Loads in Copper Electrical Conductors Mário R. O. Cunha, Tiago M. R. M. Domingues, Francisco Q. Melo, Andreia M. C. Flores, Pedro M. G. J. Moreira, E. Emanuel Almeida
#14	Ultrasonic Fatigue Testing of a Cantilevered Bending Specimen in the VHCF regime A. Oliveira, J.H. Lopes, P. Costa, R. Cláudio, R. Batalha, L. Reis
#27	Ultrasonic characterization of internal cooling channels produced by Friction Stir Channeling Job S. Silva, Rodrigo J. Coelho, Rogério F. F. Lopes, Tiago M. R. M. Domingues, P.M.G.P. Moreira, Paulo Tavares
#35	Multi-impact behaviour of cylindrical composite tubes governed by matrix characteristics: A comparative study Abderrezak Bezazi , Mohammed Bettayeb P.N.B. Reis

Tue, 13:00-13:10	Closing Session	Auditório - INEGI - Floor 3

Tue, 13:00-14:30	Lunch	Restaurant - INEGI - Floor 1

Tue, 14:30-16:00	Conference Tour	INEGI
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Visit to INEGI Labs.		
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