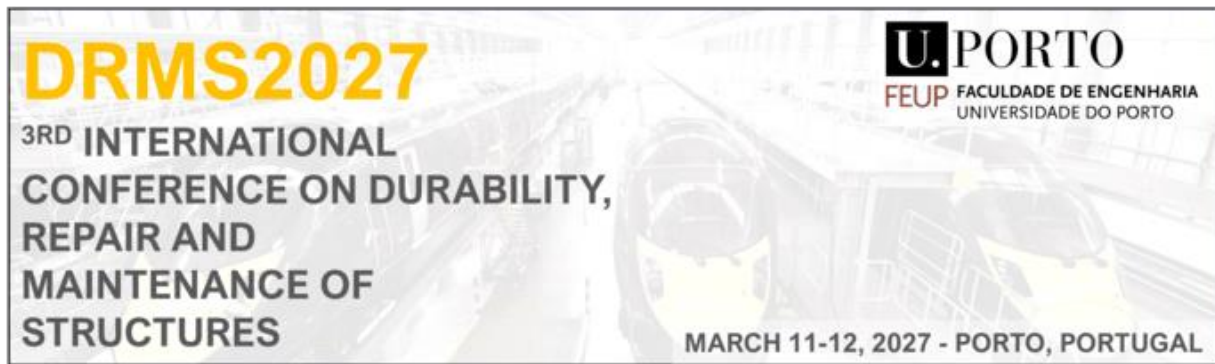




Programme of DRMS2027

Author underlined → presenting author

* Plenary lecture

Thursday 11 March 2027	
8:40	DRMS2027 Opening (Room B032)
9:00*	Durability/in-service assessment of rail vehicle structures (DRMS27_1) <u>M Leitner</u> (Graz University of Technology, Austria)
	Session 1 – Diagnostics and maintenance methodologies (Chair: LFM da Silva and A Silva)
	Room B032
9:40	From controlled damage to operational detection: What can be learnt across bridges? (DRMS27_19) <u>A Silva</u> (Universidade Lusófona, Portugal), I Dragos Moldovan, E Figueiredo, M H Faber
10:00	Learning from dam failures and continued operation: An integrated analysis of engineering vulnerabilities and failure mechanisms (DRMS27_20) <u>B Pina</u> (Universidade Lusófona, Portugal), A Silva
10:20	Bearing fault detection and localization using multiplexed Fiber Bragg Grating sensors (DRMS27_28) <u>M Heibatian</u> (KU Leuven, Belgium), A Hosseinli, A Mauricio, K Gryllias
10:40-11:00	COFFEE BREAK (Room under the Auditorium)
	Room B032
	Session 2 – Fatigue and fracture characterization (Chair: AT Ubando and A Akhavan-Safar)
	Room B032
11:00	Are adhesive joint fatigue models transferable? From model development to reliable life prediction (DRMS27_9) <u>A Akhavan-Safar</u> (INEGI, Portugal), IA Presotto, RJC Carbas, EAS Marques, LFM da Silva
11:20	Strength and failure of printed thermoplastic polyurethane for airless tire spokes (DRMS27_12) <u>A Ubando</u> (De La Salle University, Philippines), H Mansanadez, M Mallari, D Coronado, A Conversion, N Lim, I Marfori III

11:40	Reliability degradation and multi-physics failure modes across interfaces and interconnects in advanced microelectronic packaging (DRMS27_13) <u>P Maleki</u> (INEGI, Portugal), A Akhavan-Safar, RJC Carbas, EAS Marques, B Karunamurthy, LFM da Silva
12:00	Hyperelastic model selection for finite element prediction of 3D-printed TPU re-entrant lattices for non-pneumatic tires using uniaxial test data (DRMS27_22) <u>HDT Mansanadez</u> (De La Salle University, Philippines), AT Ubando
12:20	Development of a finite element analysis model for crack propagation-based fatigue life assessment of a flywheel energy storage rotor (DRMS27_23) <u>AS Cruz</u> (De La Salle University, Philippines), AT Ubando, SP Mabanta
13:00-14:00	LUNCH BREAK (Room under the Auditorium)
	Room B032
14:00*	Some new technologies for structural health monitoring (DRMS27_2) <u>K Worden</u> (The University of Sheffield, UK)
	Session 3 – Durability in civil engineering applications I (Chair: K Worden and C Andrade)
	Room B032
14:40	IMU-driven structural health monitoring: Interstory drift estimation and damage diagnosis via reconstructed mode-shape derivatives (DRMS27_5) C-Y Liu, C-H Chuang, <u>C-M Chang</u> (National Taiwan University, Taiwan)
15:00	In-situ electrochemical monitoring of weathering steel for durability assessment and maintainance (DRMS27_6) <u>E Angelini</u> (Politecnico di Torino, Italy), S Grassini, L Iannucci
15:20	Corrosion detection in reinforced concrete using the Schmidt rebound hammer (DRMS27_11) <u>GBD Bagtas</u> (Ateneo de Davao University, Philippines), JAJ Babatugon, RNC Mercadal, EB Parcon, SP Zehender
16:00-16:20	COFFEE BREAK (Room under the Auditorium)
	Session 4 – Repair of composite materials and structures (Chair: AT Marques and J Kosmann)
	Room B032
16:20	Will a glued horseshoe last a shoeing cycle? Durability of hoof-steel joints under water and urine ageing (DRMS27_7) <u>CMC Ferreira</u> (INEGI, Portugal), BD Simões, EAS Marques, RJC Carbas, LFM da Silva
16:40	Thermally triggered interfacial debonding for lid to frame disassembly in electric vehicle battery pack (DRMS27_15) <u>VCMB Rodrigues</u> (INEGI, Portugal), MM Kasaei, EAS Marques, RJC Carbas, LFM da Silva
17:00	The use of composite materials to enhance the structure's durability (DRMS27_39) CP Novo, AN Costa, <u>AT Marques</u> (University of Porto, Portugal)
17:20	Integration of visual-assisted scarfing, automated template generation and precision tools for composite repair (DRMS27_41) <u>J Kosmann</u> (German Aerospace Center (DLR), Germany), MJ Schollerer, D Holzhüter, C Hühne

17:40	Processing–microstructure–fracture behavior correlation in laser-repaired 304 stainless steel (DRMS27_45) W Jiang (Dalian University of Technology, China), XF Jiang, GL Fang, YY Li	
18:30	Poster session and RECEPTION (Room under the Auditorium)	
Fatigue and fracture characterization		
Poster 1	Quantifying loading-frequency effects in adhesive joint fatigue: definition and application of a frequency exponent (DRMS27_10)	IA Presotto, <u>A Akhavan-Safar</u> (INEGI, Portugal), RJC Carbas, EAS Marques, LFM da Silva
Poster 2	Mode I interfacial toughness and fracture behavior of polyimide–dielectric bi-layers in semiconductor thin films (DRMS27_14)	<u>P Maleki</u> (INEGI, Portugal), A Akhavan-Safar, RJC Carbas, EAS Marques, B Karunamurthy, LFM da Silva
Structural joints durability		
Poster 3	Cyclic olefin hot-melt vs. epoxy adhesives: Performance in CFRP structural joints (DRMS27_18)	RJC Carbas (University of Porto, Portugal), H Malekinejad, EAS Marques, LFM da Silva
Poster 4	Industrial case studies on joint failures: Analysis and problem solving (DRMS27_26)	<u>EAS Marques</u> (University of Porto, Portugal), RJC Carbas, LFM da Silva
Poster 5	Mechanical performance of novel hybrid self-piercing rivet–pressure-sensitive adhesive joints for lightweight structures (DRMS27_32)	<u>MM Kasaei</u> (INEGI, Portugal), RDT da Silva, RJC Carbas, BD Simões, VCMB Rodrigues, EAS Marques, LFM da Silva
Poster 6	Improving the mechanical performance of hybrid wood joints through bio-adhesive surface impregnation (DRMS27_33)	<u>Sh Jalali</u> (INEGI, Portugal), RJC Carbas, EAS Marques, LFM da Silva
Poster 7	Infrared spectroscopic indicators of molecular architecture and their relation to the peel and creep durability of acrylic foam PSAs (DRMS27_30)	<u>BD Simões</u> (INEGI, Portugal), EAS Marques, RJC Carbas, S Maul, P Stihler, P Weißgraeber, LFM da Silva
Diagnostics and maintenance methodologies		
Poster 8	Debonding on demand as a maintenance strategy for bonded horseshoes (DRMS27_8)	<u>CMC Ferreira</u> (INEGI, Portugal), BD Simões, EAS Marques, RJC Carbas, LFM da Silva
Poster 9	Characterisation and lever-based dismantling of thermally conductive adhesives for electric vehicles battery packs (DRMS27_16)	VCMB Rodrigues (INEGI, Portugal), EAS Marques, RJC Carbas, LFM da Silva
Poster 10	ARGUS: A digital platform for InSAR-based bridge monitoring, screening and maintenance support (DRMS27_44)	<u>AGB Medeiros</u> (DNIT, Brazil), MTAE Gomes, MH Ferrer, FPS Nunes

Friday 12 March 2027	
	Room B032
9:00*	How much the rebar corrosion rate depends on temperature facing climatic change? (DRMS27_3) <u>C Andrade</u> (International Center of Numerical Methods in Engineering, CIMNE, Spain)
	Session 5 – Structural joints durability I (Chair: MM Kasaei and H Wan)
	Room B032
9:40	Laser-induced multiscale surface structuring of titanium bipolar plates for interface strengthening in adhesive sealing (DRMS27_21) <u>H Wan</u> (Shanghai Jiao Tong University, China), Y Ma, P Geng, H Wang, J Min, Y Li
10:00	Design FMEA for circularity and sustainability under in-service degradation (DRMS27_25) <u>SK Devarajan</u> (Bochum University of Applied Sciences, Germany), M Inoue, S Severengiz
10:20	Fatigue durability of hybrid busbar interconnections for EV battery systems (DRMS27_31) <u>MM Kasaei</u> (INEGI, Portugal), GFS Ferreira, A Akhavan-Safar, RJC Carbas, EAS Marques, LFM da Silva
10:40-11:00	COFFEE BREAK (Room under the Auditorium)
	Room B032
	Session 6 – Durability in civil engineering applications II (Chair: M Broggi and G El-Saikaly)
	Room B032
11:00	Experimental study on the bond behavior of BFRP-to-concrete interface under monotonic loading: Effects of BFRP bond length and width ratio (DRMS27_35) <u>H Hammami</u> (École de technologie supérieure (ÉTS), Canada), J Keugong Foula, G El-Saikaly
11:20	Bond behavior of BFRP- and CFRP-to-concrete interfaces under monotonic loading: An experimental comparative study (DRMS27_36) <u>J Keugong Foula</u> (École de technologie supérieure (ÉTS), Canada), H Hammami, G El-Saikaly
11:40	Development of a finite element analysis model for the design of a flywheel energy storage rotor (DRMS27_37) <u>ADE Ulgado</u> (De La Salle University, Philippines), AT Ubando, SP Mabanta, M Navarro
12:00	Improving the impact and fatigue resistance of bio-based adhesive joints through enhanced adhesive penetration (DRMS27_34) <u>Sh Jalali</u> (INEGI, Portugal), RJC Carbas, EAS Marques, LFM da Silva
12:20	A transformative in-situ imaging and diffraction platform for corrosion research (DRMS27_46) <u>VU Mirashi</u> , W Kockelmann, N Kapur, <u>A Matamoros-Veloza</u> (University of Leeds, UK)
13:00-14:00	LUNCH BREAK (Room under the Auditorium)
	Room B032
14:00*	High-fidelity stochastic maps for robust model updating (DRMS27_4) <u>M Broggi</u> (Leibniz Universität Hannover, Germany)

	Session 7 – Durability in aerospace and automotive applications (Chair: M Leitner and EAS Marques)
	Room B032
14:40	From in-service usage data to degradation inference and end-of-life decisions: A framework for shared light electric vehicles (DRMS27_24) <u>FS Boehrke</u> (Bochum University of Applied Sciences, Germany), SK Devarajan, C Scheffer, M Inoue, S Severengiz
15:00	Advanced solid-state joining and repair strategies for aerospace and defense applications (DRMS27_27) <u>EAS Marques</u> (University of Porto, Portugal), RJC Carbas, R Beygi, LFM da Silva
15:20	Multi-objective optimization of e-scooter airless tire with auxetic metamaterial spokes (DRMS27_43) <u>A Conversion</u> (De La Salle University, Philippines), A Ubando
15:40	LSTM prediction of uniform and galvanic corrosion rates of aluminium alloys in aged aircraft structures (DRMS27_38) <u>AD Deshpande</u> (Indian Institute of Technology, India), GM Kamath
16:00-16:20	COFFEE BREAK (Room under the Auditorium)
	Session 8 – Structural joints durability II (Chair: LFM da Silva and MJ Schollerer)
	Room B032
16:20	Notch sensitivity of steels and their physically simulated heat-affected subzones based on absorbed specific fracture energy (DRMS27_40) <u>J Lukács</u> (University of Miskolc, Hungary), J Kovács
16:40	Monitoring the durability of structural adhesive bonds using fiber optic sensors (DRMS27_42) <u>MJ Schollerer</u> (German Aerospace Center (DLR), Germany), J Kosmann, D Holzhüter, L Rosenbrock, C Hühne
17:00	Lifetime prediction of pressure-sensitive adhesive joints under static and cyclic creep using a Larson-Miller framework (DRMS27_29) <u>BD Simões</u> (INEGI, Portugal), EAS Marques, RJC Carbas, S Maul, P Stihler, P Weißgraeber, LFM da Silva
17:20	Mitigating impact and fatigue damage in composite adhesive joints using bouligand-patterned adherends (DRMS27_17) <u>RJC Carbas</u> (University of Porto, Portugal), H Malekinejad, EAS Marques, LFM da Silva
19:30	DRMS 2027 BANQUET (Porto Caves Calém)