12th European Adhesion Conference and 4th Luso-Brazilian Conference on Adhesion and Adhesives

5–7 SEPTEMBER 2018

CONGRESS CENTRE OF INSTITUTO SUPERIOR TÉCNICO
(IST) – UNIVERSITY OF LISBON, PORTUGAL

PROGRAMME

EURADH / CLBA 2018

12th European Adhesion Conference and
4th Luso-Brazilian Conference on Adhesion and Adhesives

U.PORTO FEUP FACULDADE DE ENGENHARIA UNIVERSIDADE DO PORTO

TÉCNICO LISBOA

PROGRAMME OF EURADH/CLBA 2018

Author underlined → presenting author

Wednesday 5 September 2018				
8:40	**EURADH/CLBA 2018 Opening (Auditorium)**			
	Session 1A – Joint design I (Chair: RD Adams)	**Session 1B – Adhesion and surface treatments I (Chair: A Hartwig)**	**Session 1C – Adhesives development I (Chair: A Lutz)**	**Session 1D – Bioadhesion (Chair: J Bordado)**
	Auditorium	**Room 02.1**	**Room 02.2**	**Room 02.3**
9:00	Gradual degradation process of thin-walled box beams with omega cross-section subjected to 3 - point bending **(EUR18_1)** T Sadowski (Lublin University of Technology, Poland), M Nowicki	Improved glass bonding with plasma treatment **(EUR18_2)** Å Lundevall (Swerea IVF, Sweden), P Sundberg, L Mattsson	Strength and performance enhanced polyurethane adhesives and resins **(EUR18_3)** S Kelch (Sika Technology AG, Switzerland)	An innovative route to hybrid functional metallic nanoparticles/plasma polymer coatings: Application to an anti-biofouling and bactericidal material **(EUR18_4)** M Delmee, G Mertz, J Bardon, A Marguier, L Ploux, V Roucoules, D Ruch (Luxembourg Institute of Science and Technology, Luxembourg)
9:20	Development of a new apparatus for the determination of the energy release rate under mixed mode dynamic loading **(EUR18_8)** N Dagorn (Safran Aircraft Engines, France), V Joudon, G Portemont, B Bourel, F Lauro	Silicones on native aluminum – adhesion mechanisms as revealed by in situ FTIR-ERAS studies **(EUR18_5)** AL Palencia Penagos, W Possart (Saarland University, Germany)	Influence of moisture on reactive polyurethane adhesive during and after crosslinking: Chemistry, polymer dynamics and mechanical properties **(EUR18_6)** B Zimmer (Saarland University, Germany), C Nies, C Schmitt, C Paulo, W. Possart	European network of bioadhesion expertise (COST Action CA15216) **(EUR18_29)** R Santos (University of Lisbon, Portugal)
9:40	Extended finite element modelling of aluminium stepped-adhesive joints **(EUR18_24)** RMD Machado, RDSG Campilho (ISEP, Portugal), RB Rocha	Urethane molecules on native Al and Cu – Formation and state **(EUR18_9)** F Fug (Saarland University, Germany), H Jost, A Ahmed, C Pirro, W Possart	Time and temperature dependant rheology and adhesion of fast-curing two-component PUR-systems **(EUR18_11)** G Conermann (Daimler AG, Germany), K Dilger	Prevention of bioadhesion on cellulose using polymer brushes **(EUR18_98)** AS Münch, P Uhlmann (Leibniz-Institut für Polymerforschung Dresden e. V., Germany)
10:00	Strength and stiffness variability study of viscoelastic adhesive butt joints **(EUR18_45)** K Van Massenhove (KU Leuven, Belgium), D Vandepitte, S Debruyne	Effect of zones of poor adhesion in DCB fracture test **(EUR18_18)** M Taleb Ali, J Jumel, MER Shanahan (University of Bordeaux, France)	Cross-linking in an epoxy adhesive and epoxy-alumosilicate nanocomposite **(EUR18_12)** MC Weidner (Saarland University, Germany), K Johann, A Haettich, W Possart	Hierarchically patterned adhesives for reversible adhesion on rough and smooth adherent **(EUR18_116)** N Singh (Indian Institute of Technology Kanpur, India), A Ghatak
10:20	The use of high performance thermoplastics as a stress reduction feature for structural adhesive bonding of CFRP structures **(EUR18_61)** E Arikan (WIWeB, Germany), J Holtmannspötter, T Hofmann, H-J Gudladt	An advanced study for the elimination of limitations in hermetic indium bonding applications **(EUR18_220)** O Kahveci (Roketsan Inc., Turkey), V Ruzgar, S Atakan, T Yalcinkaya	Qualification of fast curing processes for elementary bonded structures **(EUR18_28)** J Ditter (Paderborn University, Germany), G Meschut	Mechanical characterization of a bio-adhesive and tensile strength for the bone-adhesive junction under different adhesion environments **(EUR18_182)** JG Vargas (Universidad de los Andes, Colombia), PA Sarmiento, JP Casas, F Salcedo, RJ Rueda, CL Moreno, JC Briceño
10:40-11:00	COFFEE BREAK			
	Session 2A – Adhesion and surface treatments II (Chair: W Possart)	**Session 2B – Joint design II (Chair: R Campilho)**	**Session 2C – Adhesive properties I (Chair: S Millington)**	**Session 2D – Pressure sensitive adhesives (Chair: H Poulis)**
	Auditorium	**Room 02.1**	**Room 02.2**	**Room 02.3**
11:00	Elucidating of adhesion mechanism by observing the solid-liquid interface between isocyanate and epoxy for multi-material car bodies **(EUR18_132)** K Sensui (Nissan Motor, Japan), T Tarui, T Miyamae, C Sato	Strain-based methodology for mixed-mode I+II fracture of composite-to-metal adhesively bonded joints **(EUR18_50)** MM Arouche (CEFET/RJ, Brazil), S Teixeira de Freitas, S de Barros	Numerical and experimental analysis of vibration damping performance of polyurethane adhesive in machine operations **(EUR18_208)** R Vervaeke (KU Leuven, Belgium), D Vandepitte, S Debruyne	Easily peelable silicone PSA containing a side-chain crystalline siloxane **(EUR18_30)** H Murakami (Nagasaki University, Japan), S Yamaguchi, M. Nanchi
11:20	Self-adhesion of unvulcanized polar elastomers **(EUR18_135)** V Hervio (Ecole Supérieure de Physique et Chimie Industrielles, France), C Creton, V Briand	Examination of mechanical behavior of but curved adhesive joints subjected to bending **(EUR18_225)** Y Ayaz (İnönü University, Turkey), Ş. Çitil	Influence of the loading speed on the fracture envelope of ductile adhesives **(EUR18_36)** G Stamoulis (Université de Bretagne Occidentale, France), N Carrere	Adhesion of solid microsphere on soft elastic surface **(EUR18_111)** S Mishima (Tokyo Institute of Technology, Japan), T Ougizawa

11:40	Electropolymerization of acrylic acid on stainless steel for improved adhesion properties **(EUR18_22)** A González-Orive (Universität Paderborn, Germany), D Meinderink, F Sahin, HC Schmidt, W Homberg, G Grundmeier	Deformation-induced residual stress in layered materials **(EUR18_35)** H Noori (Oklahoma State University, United States of America)	Filament stretching of high viscous industrial adhesives **(EUR18_56)** FJ Fassbender (Fraunhofer IFAM, Germany), B Mayer, H Fricke, T Vallée	Characterization of fibrillation process by probe tack test in various scales **(EUR18_112)** K Takahashi (Hokkaido University, Japan), R Oda, K Inaba, K Kishimoto
12:00	Laser-pretreatment of stainless steels for highly stable and autoclavable joints in medical applications **(EUR18_42)** S Mechtold (University of Kassel, Germany), S Böhm, A Heft, V Katzy	Extracting a characteristic value concerning metal/ composite hybrids – Identification of the relevant test method **(EUR18_40)** H Wehbe (Technische Universität Braunschweig, Germany), D Blass, K Dilger	Determination of the shearing behaviour of a highly elastic two component silicone adhesive using butt-bonded hollow cylinders **(EUR18_64)** R Seewald (RWTH Aachen University, Germany), B Marx, A Schiebahn, U Reisgen	The failure mechanics of PSAs under shear loading **(EUR18_127)** HK Minsky (Ecole Supérieure de Physique et Chimie Industrielles, France), C Barrios, C Creton, M Ciccotti
12:20	Improved adhesive bonding of CFRP due to re-deposition prevention during UV ns-laser cleaning **(EUR18_46)** M Veltrup (Fraunhofer IFAM, Germany), T Lukasczyk, J Ihde, B Mayer	The effect of tensile load-exposed butt-curvilinear lap joints on the strength of the adhesive **(EUR18_224)** M Demir Aydin (Erzurum Technical University, Turkey), Ş Çitil, İ Bozkurt	Nano boron nitride/ polyurethane adhesives in flexible laminated food packaging: peeling resistance and permeability properties **(EUR18_72)** AM Nacas (Federal University of ABC, Brazil), AC Chinellato, MS Salvadori, DJ dos Santos	Effect of surface contamination by oils on the durability and strength of stainless steel – polyisobutylene pressure-sensitive adhesive joints **(EUR18_145)** AV Kostyuk (A.V. Topchiev Institute of Petrochemical Synthesis, Russia), V Ya Ignatenko, TV Brantseva, SO Ilyin, SV Antonov
12:40	Improvement of the adhesion of continuously manufactured multi-material joints by application of primer **(EUR18_60)** T Reincke (Technische Universität Braunschweig, Germany), S Hartwig, K Dilger	Adhesively bonded joints for offshore structures manufactured under water **(EUR18_66)** S Myslicki (Fraunhofer IFAM, Germany), H Kordy, T Vallée, AW Momber, T Marqurad, D Amouroux, C Josse, C Cellard, L Sohier, R Crécac'hcadec	Improving the mechanical properties of epoxy adhesives using graphene nanoplatelets **(EUR18_222)** G Lara, J Cañas-Jimenez, T Garicano, JA Fernandez-Gascón, A Goñi-Urtiaga, Y Ballesteros-Iglesias, JC del Real (Universidad Pontificia Comillas)	Tuning adhesive properties of solvent-borne PSAs with ionic crosslinks **(EUR18_149)** J Tavera (BASF SE, Germany), A Del Campo, M Gerst
13:00-14:00	LUNCH BREAK			
	Session 3A – Joint design III (Chair: E Kellar)	**Session 3B – Adhesion and surface treatments III (Chair: S Debruyne)**	**Session 3C – Adhesive development II (Chair: J Broughton)**	**Session 3D – Bonding in civil engineering (Chair: S Böhm)**
	Auditorium	**Room 02.1**	**Room 02.2**	**Room 02.3**
14:00	Application a direct/ cohesive zone method for the evaluation of scarf adhesive joints **(EUR18_26)** DFO Silva, RDSG Campilho (ISEP, Portugal), FJG Silva, UTF Carvalho	High strength substance-to-substance bonded thermoset-thermoplastic joints **(EUR18_67)** M Gedan-Smolka (Leibniz-Institut für Polymerforschung Dresden e. V., Germany), I Kühnert, U Gohs, M Fischer, M Tuschla	Development of reactive polyurethane resins for use as hotmelt in the wood industry **(EUR18_164)** CSVG Esteves (Lorcol, Portugal), ICS Cardoso, A Gomes, M Bastos, J Martins, F Barreiro, JCF Fernandes, F Magalhães, L Carvalho	Fatigue of glued-in rods in engineering hardwood products – Part I: Experimental results **(EUR18_200)** S Myslicki (Fraunhofer IFAM, Germany), R Scholz, O Bletz-Mühldorfer, F Diehl, L Bathon, T Vallee, F Walther
14:20	Methodology to characterize the mechanical behavior within the adhesive joints **(EUR18_206)** J Destouesse (Safran, France), M Diakhate, C Badulescu, D Thevenet, M Stackler, W Albouy, N Carrere	Interfacial chemistry of bio-based polyurethane bonded to aluminum: an investigation using X-ray photoelectron spectroscopy **(EUR18_69)** NM Ito (ABC Federal University, Brazil), CAC Santos, RA Antunes, MC Salvadori, DJ dos Santos	Insights into the allyl-based epoxy resin/sulfur curing system: from the bonding of rubber and metal to rubber vulcanization mechanism **(EUR18_231)** J Cheng (Beijing University of Chemical Technology, China), J Zhang, Q Lian, G Zhang	Fatigue of glued-in rods in engineering hardwood products **(EUR18_201)** – Part II Numerical modelling **(Eur18_201)** S Myslicki, B Alter, T Vallée (Fraunhofer IFAM, Germany), O Bletz-Mühldorfer, F Diehl, L Bathon, R Scholz, T Vallee, F Walther
14:40	Are probabilistic methods a way to get rid of fudge factors? **(EUR18_92)** RD Adams, M Albiez, JR Correia, T Tannert, S Fecht, T Vallée (Fraunhofer IFAM, Germany)	Influence of contaminants on adhesive bonding **(EUR18_84)** H Akiyama (AIST, Japan), T Fukata, T Sato, S Horiuchi, C Sato	Effective model for the evaluation of compression flow of high-viscous adhesives **(EUR18_134)** M Müller, Y Tong, H Fricke (Fraunhofer IFAM, Germany), T Vallée	Pre-tensioned adhesively bonded hybrid-joints with lock-bolts and high-strength bolts **(EUR18_202)** C Denkert (Fraunhofer IGP, Germany), R Glienke, K-M Henkel, S Myslicki, T Vallée, H Fricke
15:00	Strength prediction of adhesively bonded single lap joints with the eXtended finite element method **(EUR18_109)** O Völkerink (German Aerospace Center, Institute for Composite Structures and Adaptive Systems, Germany), J Kosmann, M Schollerer, D Holzhüter, C Hühne	Lignin based polyurethanes adhesion to native aluminum surfaces **(EUR18_89)** DJ dos Santos (ABC Federal University, Brazil), LB Tavares, M Zamanzade, W Possart	Recent developments in inductive heating for fast curing of adhesively bonded connections **(EUR18_138)** M Adam, M Voß, T Vallée (Fraunhofer IFAM, Germany), N Ratsch, D Kohl, S Böhm, I Van de Weyenberg, F Creemers, Y Laurent, L Mauricio, R Tillet, R Créac'hcadec	Formaldehyde-free amino resins for the wood-based industry **(EUR18_159)** F Bunzel (Fraunhofer Institute for Wood Research, Germany), K Jeske
15:20	Comparison of stepped and straight design of bonded scarf joints **(EUR18_114)** D Holzhüter (German Aerospace Center, Institute for Composite Structures and Adaptive Systems, Germany), J Kosmann, O Völkerink, MJ Schollerer, C Hühne	Study of vulcanization bonding process' mechanisms of natural rubber onto metallic substrates **(EUR18_90)** E Cansell (ArianeGroup, France), V Langlois, F Bruno, A Aymonier	Two-dimensional correlation spectroscopy (2D-COS) analysys of polyol via liquefaction from Acacia mangium **(EUR18_199)** I Palle, N Hori, A Takemura (The University of Tokyo, Japan)	Accelerated curing of large scale glued-in-rods **(EUR18_209)** N Ratsch (Kassel University, Germany), M Voß, D Kohl, S Böhm, M Adam, T Vallée

15:40	Surface toughening – A concept to decrease stress peaks in bonded joints **(EUR18_118)** MJ Schollerer (German Aerospace Center, Institute for Composite Structures and Adaptive Systems, Germany), J Kosmann, O Völkerink, D Holzhüter, C Hühne	Assessment of fibre-matrix adhesion on glass-fiber reinforced geopolymer composite **(EUR18_191)** LA Alves (CEFET/RJ, Brazil), MD Banea, EG Vazquez, S de Barros	Mechanical properties and adhesive behavior of cyanoacrylate-graphene nanocomposites **(EUR18_223)** JR Cerezo Jiménez, JJ Jiménez, S Santamaría Pedrón, MA Pérez Limiñana, F Arán Ais (INESCOP, Spain)	Load bearing and failure behavior of adhesively bonded glass-metal joints in façade structures **(EUR18_203)** M Bues, C Schuler (Munich University of Applied Science, Germany), M Albiez, T Ummenhofer, S Fecht, T Vallée
16:00-16:20	COFFEE BREAK			
16:20	**POSTER SESSION**			
Adhesion and surface treatments				
Poster 1	Urethane nano-layers on native Al – Different deposition techniques and stability **(EUR18_10)**	F Fug (Saarland University, Germany), C Nies, A Ahmed, C Pirro, W Possart		
Poster 2	Electrodeposited thin interfacial organosilane films for pressure welding of aluminum to steel by plastic deformation **(EUR18_23)**	B Duderija (Universität Paderborn, Germany), A González-Orive, HC Schmidt, W Homberg, G Grundmeier		
Poster 3	Surface properties and adhesion durability of isotactic polypropylene irradiated by electron beam **(EUR18_74)**	Y Okumura (Kobe University, Japan), T Matsumoto, T Nishino		
Poster 4	Effect of surface treatment on adhesive properties of wood-plastic composite (WPC) façade cladding **(EUR18_142)**	B Nečasová (Brno University of Technology, Czech Republic), P Liška, J Šlanhof		
Poster 5	Adhesion behavior of polymer brushes by proton donor-acceptor interaction **(EUR18_186)**	H Yoshioka (Kogakuin University, Japan), M Kobayashi		
Poster 6	Particle reinforced nanocomposits as a potential approach for studying mechanical interphases? **(EUR18_217)**	C Kern (Voestalpine Stahl GmbH, Austria), B Strauß, M Rosner, L Hader-Kregl, M Nadlinger, C Paulik		
Poster 7	Study of the effect of superficial treatment and adhesive type on the adherence of pultruded composite joints **(EUR18_227)**	AC Passos (CEFET/RJ, Brazil), EM Sampaio, S de Barros		
Adhesives development				
Poster 8	Crosslinking and stability of reactive polyurethane adhesive in dry conditions: Chemistry, polymer dynamics and mechanical properties **(EUR18_7)**	B Zimmer (Saarland University, Germany), C Nies, C Schmitt, W Possart		
Poster 9	Macroscopic properties of a reactive epoxy adhesive and epoxy-alumosilicate nanocomposite **(EUR18_13)**	MC Weidner (Saarland University, Germany.), K Johann, A Keller, A Haettich, W Possart		
Poster 10	Fast polymerization at low temperature of an epoxy-amine adhesive, by Infrared radiation **(EUR18_70)**	S Genty (CIRIMAT, France), P Tingaut, M Aufray		
Poster 11	Insights into the curing and physicochemical properties of alkoxysilane functional polymers utilized in high strength adhesives and sealants **(EUR18_79)**	B Wenno, F Alves (SABA Adhesives & Sealants, The Netherlands)		
Poster 12	Photoresponsive solid-liquid phase transition behavior of azobenzene-based poly(meth)acrylates and application to reworkable adhesives **(EUR18_105)**	S Ito (AIST, Japan), H Akiyama, H Kihara, M Yoshida		
Poster 13	Electrically enhanced adhesive technology through nano-carbon fillers and functionalization **(EUR18_235)**	C Jeenjitkaew (Element Materials Technology, UK), P Hansen		
Adhesive properties				
Poster 14	The influence of curing conditions on the strength of adhesive joints **(EUR18_21)**	A Rudawska (Lublin University of Technology, Poland)		
Poster 15	Investigation of fracture energy and process zone on the adhesive joints using ductile adhesive 2 **(EUR18_82)**	K Kamiyama (Mitsubishi Electric Corp., Japan), M Mikuni, T Matsumoto		
Poster 16	Dynamic behavior of polyolefin thermoplastic hot melt adhesive under impact loading conditions **(EUR18_154)**	R Ciardiello, A Tridello, G Belingardi, L Goglio (Politecnico di Torino, Italy)		
Poster 17	Development of interfacial strength test apparatus using scratch method for flexible laminated material **(EUR18_165)**	M Uchida, Z Miyagi (Meiji University, Japan)		
Poster 18	EVA/hydrocarbon resin adhesive: a thermo-optical oscillation refraction characterization **(EUR18_177)**	DJ dos Santos (ABC Federal University, Brazil), SE Vidotti, CAS dos Santos, LL Xavier, CO Viani, PH Lixandrão Fernando, MC Salvadori		
Poster 19	Observation of phase separation structure in adhesive **(EUR18_107)**	A Hayashi (Tokyo Institute of Technology, Japan), Y Sekiguchi, C Sato		
Poster 20	Shear properties of structural adhesives obtained with a novel torsion machine **(EUR18_195)**	RJC Carbas (INEGI, Portugal), M Costa, LFM da Silva		
Poster 21	Addition of silver 2-ethylhexanoate to enhance thermal and electrical conductivity in epoxy-based electrically conductive adhesive **(EUR18_123)**	L-T Tseng (National Sun Yat-sen University, Taiwan), J-Q Ho, C-H Chen		
Joint design				
Poster 22	Cohesive zone optimization of tensile loaded tubular adhesive joints **(EUR18_25)**	LRF Ferreira, RDSG Campilho (ISEP, Portugal), RJB Rocha, DR Barbosa		
Poster 23	Joint geometry optimization for aluminium adhesive bonds under tensile loads **(EUR18_27)**	NGC Barbosa, RDSG Campilho (ISEP, Portugal), FJG Silva, RDF Moreira		

Poster 24	Strength of hybrid laminates metal-carbon fibre joints with different lay-up configurations **(EUR18_44)**	RJC Carbas (INEGI, Portugal), DG dos Santos, LFM da Silva
Poster 25	Prediction of adhesion failure of bonded joints using 3-point bending test and stress-energy coupled criterion **(EUR18_59)**	TV Birro (ISAE-SUPAERO, France), E Paroissien, M Aufray, F Lachaud
Poster 26	Influence of technological procedures on mechanical properties of bonded joints **(EUR18_143)**	P Liška (Brno University of Technology, Czech Republic), B Nečasová, J Šlanhof
Poster 27	Thermal deformation of dissimilar materials bonded adhesively **(EUR18_193)**	N He (Tokyo Institute of Technology, Japan), C Sato, Y Sekiguchi
Poster 28	Adhesion on hybrid polymeric materials produced by DDM **(EUR18_198)**	AM Pereira (Polytechnic Institute of Leiria, Portugal), MR Silva, PNB Reis, JAM Ferreira
Poster 29	Functionally graded joints with two-parts acrylic adhesive **(EUR18_214)**	C Sato, M Nakanouchi (Tokyo Institute of Technology, Japan), K Haraga, H Uno
Durability		
Poster 30	Influence of hygrothermal aging on the fatigue behaviour of similar and dissimilar adhesive joints for the automotive industry **(EUR18_49)**	JJM Machado (INEGI, Portugal), EAS Marques, AQ Barbosa, LFM da Silva
Poster 31	Fatigue life prediction of adhesive bonded joints under mixed mode loading conditions **(EUR18_76)**	M Costa (INEGI, Portugal), R Goyal, M El-zein, LFM da Silva
Poster 32	Effect of temperature on the behaviour of multi-material adhesive joints for the automotive industry **(EUR18_194)**	MQ dos Reis (CEFET/RJ, Brazil), RJS Carbas, LFM da Silva, MD Banea
Poster 33	Influence of temperature on mixed adhesive joints under impact conditions **(EUR18_196)**	JJM Machado (INEGI, Portugal), EAS Marques, LFM da Silva
Poster 34	Impact strength of composite joints for the automotive industry **(EUR18_197)**	EAS Marques (INEGI, Portugal), PM Gamarra, JJM Machado, LFM da Silva
Non-destructive testing		
Poster 35	Visualization of dis-bonding in adhesive area through mechanoluminescence **(EUR18_216)**	N Terasaki (AIST, Japan), Y Fujio, Y Sakata
Applications		
Poster 36	Advanced structural 2K epoxy adhesives for construction and refurbishment **(EUR18_153)**	R Xu Rabl (Sika Technology AG, Switzerland), U Gerber, J Finter, S Kelch
Poster 37	Durability of the structural adhesive joints for façade applications exposed to a modified cataplasm test **(EUR18_14)**	K Machalická (Czech Technical University in Prague, Czech Republic), M Vokáč, M Eliášová
19:00	**RECEPTION (ROOFTOP Bar Hotel Mundial)**	

Thursday 6 September 2018				
	Session 4A – Adhesion and surface treatments IV (Chair: J Vrenken)	**Session 4B – Fracture mechanics (Chair: N Carrere)**	**Session 4C – Adhesive properties IV (Chair: V Nassiet)**	**Session 4D – Durability - Effect of temperature (Chair: E Marques)**
	Auditorium	**Room 02.1**	**Room 02.2**	**Room 02.3**
8:40	Interfacial structure between deuterated and non-deuterated polyamide 66 **(EUR18_75)** N Shimoura (Kobe University, Japan), T Matsumoto, T Nishino	Fracture toughness of rubber/stainless steel bonding using nanothick adhesive **(EUR18_53)** MK Budzik (Aarhus University, Denmark), S Heide-Jørgensen, RK Møller, KB Buhl, SU Pedersen, K Daasbjerg, M Hinge	The importance of a bondline fillet for the Thick Adherend Shear Test **(EUR18_86)** LD Vaughn, FJ Guild, RD Adams (University of Bristol, UK)	Effect of environmental ageing at lower and sub-zero temperatures on adhesive joint strength **(EUR18_20)** A Rudawska (Lublin University of Technology, Poland), JW Sikora, M Müller, P Valasek
9:00	Two part polyurethane adhesives for bonding thermoplastic and thermoset reinforced plastics **(EUR18_94)** S Grunder (DOW Europe GmbH, Switzerland), S Schmatloch, A Lutz	On toughness of heterogenous interfaces **(EUR18_52)** MK Budzik (Aarhus University, Denmark)	Digital image correlation strain measurement of thick adherend shear test specimen joined with an epoxy film adhesive **(EUR18_100)** J Kosmann (German Aerospace Center, Germany), O Völkerink, M J Schollerer, D Holzhüter, C Hühne	Effects of infrared radiation on thermal, mechanical and adherence properties of an epoxy-amine adhesive by using Design Of Experiment (DOE) **(EUR18_71)** S Genty (CIRIMAT, France), P Tingaut, M Aufray
9:20	Improvement of silicone rubber/metal assembly: Influence of primer mixture and metal roughness **(EUR18_96)** F Sosson, L Belec, FX Perrin, A Grard (Université de Toulon-La Garde, France)	Experimental study on the fracture behaviour of hyperelastic adhesive joints subjected to mixed-mode I+III loading **(EUR18_204)** L Loh, I Kididane, S Marzi (Technische Hochschule Mittelhessen, Germany)	Chemical composition of melamine-urea-formaldehyde (MUF) resins assessed by near-infrared (NIR) spectroscopy **(EUR18_207)** MS Gonçalves (University of Porto, Portugal), NT Paiva, JM Ferra, JM Martins, LH Carvalho, FD Magalhães	The effect of space environment on the mechanical properties of structural adhesives **(EUR18_133)** J Zimmermann (RWTH Aachen University, Germany), MZ Sadeghi, KU Schroeder
9:40	Unravelling the two fundamental adhesion mechanisms of nanoporous anodic aluminium oxides (AAO) with epoxy **(EUR18_97)** ST Abrahami (Vrije Universiteit Brussel, Belgium), JMM de Kok, VC Gudla, K Marcoen, T Hauffman, R Ambat, JMC Mol, H Terryn	Fracture mechanics of a rubber tube – metal cord inflation test **(EUR18_17)** K Kane (University of Bordeaux, France), J Jumel, F Lallet, A Mbiakop-Ngassa, J-M Vacherand, MER Shanahan	Development of two-component structural adhesive for bonding of metals and polymeric composites **(EUR18_77)** S-N Wang, Y Li, Y-M Guo, B Cai, Z-X Liu (Zhengzhou University, China), P-C Wang	Structural adhesive bonding of galvanized steels: Performance before and after hydrothermal ageing **(EUR18_190)** M Nadlinger (CEST GmbH, Austria), L Hader-Kregl, C Kern, M Rosner, R Aichinger, C Hager-Roiser, M Fleischanderl, C Paulik

10:00	Cleaning and activating HDG coil-steel by blasting with primer-doped carbon dioxide snow **(EUR18_99)** L Götz (University of Kaiserslautern, Germany), PL Geiß	Coupling between adhesion and energy dissipation in laminated glass **(EUR18_210)** P Fourton (PSL University, France), N Taccoen, M Ciccotti, E Barthel	Mechanoluminescence visualization of crack propagating and fracture frontline during DBC test in similar and dissimilar material bonding **(EUR18_140)** N Terasaki (AIST, Japan), Y Fujio, Y Sakata, S Horiuchi, H Akiyama	Adhesive joining of highly filled PP/graphite bipolar plates as a sealing method in fuel cells **(EUR18_219)** P Rzeczkowski (Leibniz-Institut für Polymerforschung Dresden e.V., Germany), B Krause, A Müller, M Lucia
10:20	Surface modification through Friedel-Crafts reaction and epoxidation for adhesion between poly(ether ether ketone) and epoxy adhesives **(EUR18_106)** T Matsumoto (Kobe University, Japan), A Miyagaki, T Nishino	Cohesive failure of hyperelastic adhesive joints by cavitation **(EUR18_218)** P Weißgraeber (Robert Bosch GmbH, Germany), K Bühler	Impact of the synthesis processes on urea formaldehyde resins performance **(EUR18_179)** C Gonçalves (University of Porto, Portugal), J Pereira, N Paiva, J Ferra, J Martins, F Magalhães, A Barros-Timmons, L Carvalho	
10:40-11:00	COFFEE BREAK			
	Session 5A – Coatings (Chair: F Arán Ais)	**Session 5B – Durability - Effect of water (Chair: A Takemura)**	**Session 5C – Impact loading (Chair: C Sato)**	**Session 5D – Repair (Chair: S de Barros)**
	Auditorium	**Room 02.1**	**Room 02.2**	**Room 02.3**
11:00	Determination of coating properties by using analytical centrifugation **(EUR18_115)** U Rietz (LUM GmbH, Germany), D Lerche, S Hielscher, D Grunwald, U Beck	Lifetime prediction and safety of adhesively bonded joints under detrimental service conditions **(EUR18_54)** K Groß (University of Kaiserslautern, Germany), PL Geiß	Impact deformation of an adhesive layer measured with tensile Split-Hopkinson bar apparatus **(EUR18_192)** C Sato, A Hayashi (Tokyo Institute of Technology, Japan), Y Sekiguchi	Debonding of adhesive joints by means of microwave and induction heating processes **(EUR18_95)** R Ciardiello (Politecnico di Torino, Italy), F Litterio, G Belingardi, B Martorana, M Zanetti, V Brunella
11:20	Structural bonding of steel structures for mobile ACE coated with weather resistant single-layer e-coats (MonoBond) **(EUR18_32)** D Estephan (University of Kassel, Germany), M Kahlmeyer, R Nothhelfer-Richter	Performance of adhesively bonded hot-dip galvanized steel sheets across different corrosion tests **(EUR18_58)** L Hader-Kregl (CEST GmbH, Austria), M Nadlinger, C Kern, M Rosner	Effect of low velocity impact and thermal-oil ageing on mechanical properties of composite joints bonded with a ductile adhesive **(EUR18_178)** T Akderya (Katip Çelebi University, Turkey), M Çevik, O Sayman	Restoring cultural heritage: The development of adhesives for the consolidation of flaking and fragile paint **(EUR18_65)** CA Del Grosso, JA Poulis (Delft University of Technology, The Netherlands), ER de la Rie
11:40	Heating behavior and adhesion performance of induction responsible multilayered thermoplastic polyurethane adhesive film **(EUR18_19)** ST Oh, GN Kim, YS Kwon, TK Lee, MJ Moon, MY Shon (Pukyong National University, Korea)	Accelerated degradation method for single-lap joints and metal-plastic assemblies using pressure vessels with heat and moisture **(EUR18_211)** M Funabashi (AIST, Japan.), F Ninomiya hor, T Shimada	Strain rate and temperature dependent behaviour of structural adhesive joints for the automotive industry **(EUR18_48)** EAS Marques (INEGI, Portugal), JJM Machado, PDP Nunes, LFM da Silva	Experimental and 3-D non-linear stress analysis of adhesively bonded curved pipe lap joints **(EUR18_215)** S Çitil (Adıyaman University, Turkey), İ Bozkurt, MD Aydın
12:00	Molecular adhesion studies on ZnO nanorod film coated stainless steel **(EUR18_16)** D Meinderink (University of Paderborn, Germany), AG Orive, G Grundmeier	Durability and flammability evaluation of SGA structural adhesives joint consisting of thick adhesive layer for shipbuilding **(EUR18_128)** T Iwata (National Institute of Maritime, Japan), H Hayashibara	A robust material model for adhesive bonding under high speed impact **(EUR18_212)** S Treutenaere, B Bourel (LAMIH Valenciennes, France), F Lauro, W Albouy, R Ortiz	Tensile and shear properties of epoxy bonding adhesives at elevated temperatures - influence on the bond behaviour of CFRP strengthening systems **(EUR18_221)** MG Roquette, JP Firmo, JR Correia (Universidade de Lisboa, Portugal), AS Azevedo
12:20	Growth, deformability and adhesion of metallic thin films deposited on elastomeric substrates **(EUR18_124)** J Schweitzer (Institut de Science des Matériaux de Mulhouse, France.), F Bally-Le Gall, T David, F Rouillard, A Beziat, V Roucoules, L Vonna	Oxidative mechanisms of brass in a confined environment: application to the durability of the rubber to metal bonding in tires **(EUR18_152)** S Benart (University of Bordeaux, France), M Touzet-Cortina, J Jumel, J El Yagoubi	Development of a dynamic shear test for bonded joint using adhesive behavior numerical simulation **(EUR18_205)** W Albouy, M Stackler (Safran, France), N Carrere, M Lecomte	Using blister test to predict the failure pressure in bonded composite repaired pipes **(EUR18_161)** S de Barros (CEFET/RJ, Brazil, B Fadhil, F Alila, J Diop, P Casari, PF Jacquemin
12:40	Multilayer thin coatings for corrosion protection of aluminium alloy AA2024-T3 **(EUR18_147)** J Witt (Federal Institute for Materials Research and Testing (BAM), Germany), A Almalla, O Ozcan	Surface pre-treatment effect on the adhesion and durability of a steel-epoxy interface **(EUR18_213)** JPB van Dam (TU Delft, The Netherlands), H Terryn, JMC Mol		
13:00-14:00	LUNCH BREAK			

	Session 6A – Adhesion and surface treatments V (Chair: M Shanahan)	Session 6B – Production issues (Chair: JC del Real)	Session 6C – Durability - Fatigue I (Chair: L Goglio)	Session 6D – Hybrid joints (Chair: T Vallée)
	Auditorium	**Room 02.1**	**Room 02.2**	**Room 02.3**
14:00	Investigation of the surface treatment effects for polypropylene surface **(EUR18_108)** T Sato (AIST, Japan), T Miyamae, H Akiyama, S Horiuchi	Influence of production parameters on the mechanical behaviour of composite/metal specimens assembled via adhesive bonding technology **(EUR18_43)** FC Bödeker (ENSTA Bretagne, France), G Stamoulis, T Bonnemains, E Lolive, S Marzi	Development of a cohesive zone element for adhesive joints subjected to fatigue and humidity degradation **(EUR18_47)** M Costa (INEGI, Portugal), G Viana, LFM da Silva, RDSG Campilho	Stiffness and strength analysis of hybrid adhesive bonded – spot welded sandwich samples by means of virtual FE testing **(EUR18_38)** J Weiland (RWTH Aachen University, Germany), S Debruyne, D Vandepitt, B Marx, A Schiebahn, U Reisgen
14:20	Effect of high concentrations of admixed water in an atmospheric pressure plasma jet system onto the surface of various polymers **(EUR18_122)** M Kehrer (Johannes Kepler University, Austria), A Hinterreiter, J Duchoslav, A Mehic, T Stehrer, D Stifter	Low-cost natural binder for particle boards production: study of manufacture conditions **(EUR18_162)** AM Ferreira (University of Porto, Portugal), J Pereira, M Almeida, J Ferra, N Paiva, J Martins, LH Carvalho, FD Magalhães	Effect of stress concentrations on the fatigue behaviour of structural adhesives **(EUR18_55)** VC Beber (Fraunhofer IFAM, Germany), B Schneider, M Brede	Vaporizing foil actuator weld bonding **(EUR18_171)** BJ Ufferman (The Ohio State University, USA), MJ Barker, A Vivek, GS Daehn
14:40	Thermal adhesion by polymer brushes with various molecular weight distribution and graft density **(EUR18_126)** H Yoshioka, Y Aoki, K Nonaka, M Kobayashi (Kogakuin University, Japan)	Hydro-abrasion wear of metering systems by conveying high-viscosity adhesives **(EUR18_15)** H Fricke (Fraunhofer IFAM, Germany), B Mayer	Fatigue shear strength of hybrid interfaces press-fitted and bonded with Loctite 638 **(EUR18_73)** M Ragni (University of Modena and Reggio Emilia, Italy), D Castagnetti, E Dragoni	Hybrid connections in supporting structures of wind turbines **(EUR18_131)** M Albiez (Karlsruhe Institute of Technology, Germany), S Myslicki, T Vallée, H Ehard, C Schuler, T Ummenhofer
15:00	UV induced surface grafting based on carbene **(EUR18_232)** F Gao (Beijing University of Chemical Technology, China), H Sun, J Cheng, Y Li, JY Zhang	Open time studies with a production near test setup on polyurethane adhesives for industrial applications **(EUR18_234)** S Mahnel (BMW AG, Germany), F Bannert, G Grundmeier	Monitoring the fatigue crack growth behaviour of composite joints using in situ 2D-digital image correlation **(EUR18_83)** T Thäsler (Bundeswehr University Munich, Germany), J Holtmannspötter, HJ Gudladt	Bonding performance after aging of fusion bonded hybrid joints **(EUR18_63)** K Lippky (Technische Universität Braunschweig, Germany), D Blass, K Dilger
15:20	Laser welding of aluminum-polyamide assemblies: influence of aluminum surface pre-treatment on the joint strength **(EUR18_160)** J Bardon (Luxembourg Institute of Science and Technology, Luxembourg), A Al Sayyad, D Del Frari, P Hirchenhahn, L Houssiau, P Plapper	Process parameters/ performances relationship for "dry" surface preparation **(EUR18_31)** E Chauray, N Cuvillier, P Lespade (IRT Saint Exupéry, France), B Martin, A Mercier	Durability assessment of laser treated aluminium bonded joints **(EUR18_117)** F Musiari (Università degli Studi di Parma, Italy), F Moroni, C Favi, A Pirondi	Constructive design of bonded FRP mixed joints under consideration of edge effects **(EUR18_93)** J Göddecke (University of Paderborn, Germany) G Meschut, D Teutenberg
15:40	Tailoring adhesion between 3D printed patterns and textiles **(EUR18_163)** V Potier (INSA Lyon, France), J Duchet, JF Gérard	A comparative study on optical bonding of glass-ceramics **(EUR18_226)** H Yetgin (Middle East Technical University, Turkey), TO Fenercioglu, OC Aktas, T Yalcinkaya	Integration of electric fields to tune the adhesion of micropatterned adhesives **(EUR18_51)** V Chopra (Leibniz Institute for New Materials, Germany), R Hensel, E Arzt	
16:00-16:20	COFFEE BREAK			
	Session 7A – Adhesion and surface treatments VI (Chair: H Poulis)	**Session 7B – Applications I (Chair: F Gilbert)**	**Session 7C – Durability – Fatigue II (Chair: R Créac'hcadec)**	
	Auditorium	**Room 02.1**	**Room 02.2**	
16:20	The effect of cold atmospheric plasma treatment on the structural adhesive bond performance of 2024 aluminium **(EUR18_167)** T Li (TWI Ltd, UK), DF Williams, EJC Kellar, GW Critchlow	Project SYSCO **(EUR18_39)** N Merlinge (ENIT, France), B Hassoune-Rhabbour, T Mérian, A Visse, V Nassiet	Fatigue behaviour of hybrid bonded joints **(EUR18_119)** F Moroni (Università degli Studi di Parma, Italy)	
16:40	STEM-EDX/EELS simultaneous analysis of metal/plastic joint interfaces for the investigation of adhesion mechanism **(EUR18_168)** S Horiuchi (AIST, Japan), H Hakukawa	International qualification for adhesive bonding personnel assures quality and reliability of adhesive bonded parts **(EUR18_57)** T Rosado (EWF, Portugal), A Almeida, L Quintino, E Assunção	Fatigue assessment of multiaxial loaded adhesively bonded joints **(EUR18_130)** G Rybar (Technische Universität Darmstadt, Germany), J Baumgartner	

17:00	Towards new coupling agents based on Lewis acid/base functionalized calixarenes **(EUR18_174)** RA Septelean, D Grec, GN Nemes (Babes-Bolyai University, Romania)	Use of adhesives in automotive industry: current applications and opportunities ahead **(EUR18_68)** P d'Herlincourt (RENAULT, France), M Ragazzini, A Fleury	Mixed-mode fatigue lifetime prediction tool for adhesively bonded joints **(EUR18_136)** MZ Sadeghi (RWTH Aachen University, Germany), J Zimmermann, A Gabener, KU Schroeder	
17:20	Adhesion of functionally graded epoxy adhesives by a probe tack test **(EUR18_235)** O Tramis, B Hassoune-Rhabbour, M Fazzini, V Nassiet (Toulouse University, France)	Durability assessment of adhesives systems for "Bond & Bolt" gas pipe saddles **(EUR18_125)** T Chapman, S Millington (ARTIS, UK), C Webb	Ultrasonic Very High Cycle Fatigue (VHCF) tests on a cyanoacrylate and on a high strength epoxy adhesive **(EUR18_157)** A Tridello, DS Paolino, L Goglio (Politecnico di Torino, Italy), G Chiandussi, M Rossetto	
17:40	New interfacial agents for enhanced interfacial shear strength in PPS/basalt composites **(EUR18_176)** B Gaumond (INSA Lyon, France), S Livi, J Duchet	Towards an European code regulating adhesively bonded connections of G-FRP structures for civil engineering? **(EUR18_151)** T Vallée, M Adam, JF Caron, JR Correia (University of Lisbon, Portugal), L Ascione	The effect of environment and fatigue loading on the mechanical behaviour of TEPs-modified adhesives **(EUR18_236)** MD Banea (CEFET/RJ, Brazil), LFM da Silva, R Carbas, S de Barros, LFG de Souza	
18:00	Adhesion between addition curing silicones and aluminum substrates **(EUR18_181)** A Kochanke (Robert Bosch GmbH, Germany), J Nagel, C Uffing, A Hartwig	Surface preparation and geometric considerations for structural bonding of steel **(EUR18_228)** N Tortorella (Deere & Company, USA), RK Goyal, R Athikary, M El-zein		
20:00	**EURADH/CLBA 2018 BANQUET (Forte de São Julião)**			

Friday 7 September 2018				
	Adhesion Innovation Award			
	Auditorium			
8:40	Composite pillars with a tunable interface for adhesion to rough substrates **(EUR18_230)** R Hensel (Leibniz Institute for New Materials, Germany)			
	Session 8A – Adhesives development III (Chair: M Aufray)	**Session 8B – Non-destructive testing (Chair: RD Adams)**	**Session 8C – Wood bonding (Chair: H Fricke)**	
	Auditorium	**Room 02.1**	**Room 02.2**	
9:00	New approach to design epoxy based adhesive tapes **(EUR18_148)** R Friedland (Lohmann GmbH & Co. KG, Germany), M Welteroth	Structural health monitoring in adhesively bonded CFRP joints with fibre optic sensors **(EUR18_33)** N Grundmann (Fraunhofer IFAM, Germany), K Brune	Effect of a thermal postcure on the micro- and macromechanical properties of polyurethane bonded wood **(EUR18_110)** C Winkler (University of Applied Sciences Eberswalde, Germany), U Schwarz, J Konnerth	
9:20	Asphaltenes as fillers for epoxy resins **(EUR18_146)** V Ya Ignatenko (A.V. Topchiev Institute of Petrochemical Synthesis, Russia), AV Kostyuk, S V Antonov, SO Ilyin	Design and preparation of dye-filled microcapsules for health monitoring in adhesive bonds **(EUR18_41)** M Kahlmeyer (University of Kassel, Germany), A Winkel, S Boehm	Fracture mechanics based joint capacity prediction of glued-in rods with hardwood **(EUR18_91)** S Myslicki, T Vallée, O Bletz-Mühldorfer, F Diehl, I Limeira, C Lavarec, R Créac'hcadec (IRDL, France)	
9:40	New tough body shop adhesives for light weight body structure bonding **(EUR18_129)** F Koch (Dow Europe GmbH, Switzerland), A Lutz	Analyzing the effects of embedding Fibre Bragg Grating sensors into structural adhesive joints **(EUR18_62)** S Fevery (University of Leuven, Belgium), S Debruyne, H Hallez, D Vandepitte	A new creep test for non-structural wood adhesives **(EUR18_155)** B Pizzo, F Bernardini, F Chiozza (Vinavil SpA, Italy)	
10:00	Epoxidation of kraft lignin: An alternative to bisphenol A in the synthesis of epoxy adhesives **(EUR18_172)** CL Costa (ABC Federal University, Brazil), JR Gouveia, DJ dos Santos	Fresnel reflection based fiber optic for study of the polymerisation of bonded joints **(EUR18_78)** R Grangeat (Université de Nantes, France), M Girard, C Lupi, F Jacquemin		

10:20	Rational design of epoxy/ polysiloxane adhesive with excellent damping properties **(EUR18_233)** JY Zhang (Beijing University of Chemical Technology, China), J Cheng, Y Li, WP Duan, PB Zhang	Inspection of surface contamination using LIBS for adhesive bonding of multiple materials **(EUR18_81)** T Sato (AIST, Japan), Y Kawaguchi, H Akiyama, H Ohmura		
10:40-11:00	COFFEE BREAK			
	Session 9A – Applications II (Chair: N Tortorella)	**Session 9B – Joint design IV (Chair: C Sato)**	**Session 9C – Bioadhesives (Chair: D dos Santos)**	
	Auditorium	**Room 02.1**	**Room 02.2**	
11:00	Pre-fixation for boosterd 1C polyurethane applications **(EUR18_144)** FM Altenwegner (Sika Automotive GmbH, Germany), D Urbach	What has the single lap shear joint done for us? **(EUR18_165)** DF Williams, EJC Kellar (TWI Ltd, UK)	Fully biobased structural adhesives **(EUR18_34)** A Hartwig (Fraunhofer IFAM, Germany), K Richter, M Blumenstein	
11:20	Rubber gasket bonding for plate heat exchangers - how to replace an adhesive that has been in use for +50 years **(EUR18_150)** J Anehamre (Alfa Laval Lund AB, Sweden)	Mechanical properties of lap shear joint boned with two-part epoxy adhesive **(EUR18_141)** K Naito (National Institute for Materials Science, Japan), H Oguma, HB Kim	Preparation of biodegradable functionalized polyesters to be applied as surgical adhesives **(EUR18_101)** T Cernadas (University of Coimbra, Portugal), FMM Gonçalves, SP Miguel, IJ Correia, P Ferreira	
11:40	Shear strength of bed joints of glass brick masonry **(EUR18_156)** Z Sokol (Czech Technical University in Prague, Czech Republic), M Eliášová, J Fíla	Numerical modelling of double lap joint assemblies using interface elements **(EUR18_180)** O Nemes (Technical University of Cluj-Napoca, Romania), AE Tiuc, M Platon	Development of natural-based adhesives from lignocellulosic biomass **(EUR18_103)** JC Bordado, AC Marques, ER Silva, D Gonçalves, M Neves, MM Mateus, S Matos, AC Cardoso, MR Costa, R Galhano dos Santos (CERENA/IST, Portugal)	
12:00	Adhesive joints for structural applications – glass column subjected to compression **(EUR18_158)** M Eliášová (Czech Technical University in Prague, Czech Republic), R Kalamar, Z Sokol	Modelling of bonded joints with flexible adhesives **(EUR18_183)** A Chiminelli, C Valero (ITAINNOVA, Spain), E Duvivier, M Lizaranzu, C López, M Canales	Enhanced bonding strength of hydrophobically-modified fish gelatin-based tissue adhesive **(EUR18_113)** T Taguchi (National Institute for Materials Science, Japan), R Mizuta	
12:20	Evaluation of the Von Mises stress field in bonded tiling ceramics as a function of elastic modulus of the tile adhesive and joint grout mortars **(EUR18_169)** L Silva (Saint-Gobain Weber, Portugal), P Sequeira, F Melo, C Lopes	Epoxy-aluminium scarf joints strength under multiaxial loadings **(EUR18_184)** AM Pereira (Polytechnic Institute of Leiria, Portugal), PNB Reis, JAM Ferreira		
12:40	Comparison of the deformation induced by local damage mechanisms of a deep drawing and a high strength temper rolled galvanized steel **(EUR18_175)** F Gilbert (ArcelorMittal Global R&D, France), D Jacquet, JM Mataigne, J Legendre, R Créac'hcadec, A Tanguy, S Hallais and E Héripré	Joining-technique selection for complex multi-material structures focusing on the mechanical behaviour of adhesive joints **(EUR18_139)** SP Sikora, M Brodbeck, T Behling (DLR eV, Germany)		
13:00	**EURADH/CLBA 2018 Best papers awards and Closing (Auditorium)**			
13:15-14:00	LUNCH BREAK			