

## Programme of IAA2020

Author underlined → presenting author

<b>Thursday 5 March 2020</b>		
8:40	<b>IAA 2020 Opening (Auditorium SUNRISE)</b>	
	<b>Session 1A – Automotive industry I (Chair: F Fischer and G Anderson)</b>	<b>Session 1B – Industrial adhesives developments I (Chair: A Lutz and J Que)</b>
	<b>Room LAGOON I</b>	<b>Room LAGOON II</b>
9:00	Fracture envelope of automotive adhesives under impact ( <b>IAA20_3</b> ) CSP Borges (INEGI, Portugal), PDP Nunes, A Akhavan-Safar, EAS Marques, RJC Carbas, L Alfonso, LFM da Silva	Industrial applications of 2C structural adhesives with curing-by-design technology for composites and mixed material bonding ( <b>IAA20_15</b> ) C Di Fratta (Sika, Switzerland), M Zivaljic, F Choffat, B Bosshard
9:20	Mode I fracture toughness of a polyurethane adhesive ( <b>IAA20_11</b> ) K Naito (National Institute for Materials Science, Japan), Y Ogawa, H Oguma	Rational design of Si-C hybrid networks to achieve their potential ultralow-temperature damping applications ( <b>IAA20_21</b> ) Y Li (AVIC Manufacturing Technology Institute, China), B Zhang, J Zhang
9:40	Evaluation of kinetic studies and mechanical properties of lignin-epoxy adhesives in structural wood applications for automotive components ( <b>IAA20_13</b> ) A Aniol (Volkswagen, Germany), T Grosse, F Fischer, S Böhm	Study on the properties of epoxy resin adhesives with ultrahigh ductility ( <b>IAA20_20</b> ) JG Yu, J Wang, YS Yi, ZJ Zhao (AVIC Composites, China)
10:00	Silane-based pre-treatment of aluminium alloy for durable adhesive joining ( <b>IAA20_22</b> ) Y Takahashi (Kobe Steel, Japan), S Yamamoto, D Katsuno	Structural adhesives used for renewable energy industry - Structural applications relative to wind blades manufacturing and solar concentration panels ( <b>IAA20_43</b> ) A Sastre (Sika, Spain)
10:20	Design for manufacturing of bonded aluminium alloy spaceframes for buses body in white: a case study ( <b>IAA20_37</b> ) AA Fernandes (University of Porto, Portugal)	
<b>10:40-11:00</b>	<b>COFFEE BREAK</b>	
	<b>Session 2A – EU Qualify project (Chair: JM Varas)</b>	<b>Session 2B – Industrial adhesives developments II (Chair: M Olive and M Geistbeck)</b>
	<b>Room LAGOON I</b>	<b>Room LAGOON II</b>
11:00	The QUALIFY project: an overview ( <b>IAA20_30</b> ) J Mediavilla Varas (M2i, Netherlands)	Strategies for self-healing and recycling thermosetting polymers ( <b>IAA20_72</b> ) YZ Tian, MJ Fan, XY Mo, FL Han, PB

		Zhang, LJ Shen, JY Zhang, J Cheng (Beijing University of Chemical Technology, China)
11:20	The QUALIFY project: A shipbuilder's view to adhesive bonding ( <b>IAA20_28</b> ) CPRJ Verhaeghe (Damen Schelde Naval Shipbuilding, Netherlands), A Ruitenbergh	Bonding strategy for inert and difficult-to-stick surfaces ( <b>IAA20_73</b> ) WP Duan, JH Ma, K Li, WY Li, J Cheng, JY Zhang (Beijing University of Chemical Technology, China)
11:40	The QUALIFY project: FE simulations of adhesively bonded structures for shipbuilding industry ( <b>IAA20_29</b> ) A Krairi (M2i, Netherlands), J Mediavilla Varas	Design principles for structural bonding with hyperelastic adhesives ( <b>IAA20_65</b> ) PL Rosendahl (TU Darmstadt, Germany), M Drass, M Kraus, P Weißgraeber
12:00	The QUALIFY project: Damage characterization of a full-scale steel/composite adhesive joint for naval application ( <b>IAA20_31</b> ) PR Jaiswal (Ghent University, Belgium), R Iyer Kumar, M Saedifar, MN Saleh, J Windels, W De Waele	Debonding on demand of structural assemblies: Context and example of industrial projects ( <b>IAA20_61</b> ) M Olive (Rescoll, France), T Bergara
12:20	The QUALIFY Project: Using infrared thermography and block loading schemes to evaluate the fatigue damage mechanisms and accumulation in hybrid adhesive joints ( <b>IAA20_32</b> ) R Iyer Kumar (Ghent University, Belgium), PR Jaiswal, W De Waele	Debonding of adhesive joints by means of microwave and induction heating processes ( <b>IAA20_57</b> ) R Ciardiello, F Litterio, G Belingardi, V Brunella (University of Torino, Italy)
12:40	The QUALIFY project: Towards safe hybrid joints qualifications ( <b>IAA20_27</b> ) L Mouton (Bureau Veritas Marine & Offshore, France), S Paboeuf, L Starink	
<b>13:00-14:00</b>	<b>LUNCH BREAK</b>	
	<b>Session 3A – Aeronautic industry (Chair: N Carrere and J Kosmann)</b>	<b>Session 3B – Studies applicable to various industries I (Chair: F Aran-Ais and S-B Jung)</b>
	<b>Room LAGOON I</b>	<b>Room LAGOON II</b>
14:00	Current challenges for adhesive bonding processes in space applications ( <b>IAA20_69</b> ) P Janik (European Space Agency, Netherlands.), M Olive, M Holynska, S Rodrigez, R Rampini	Interface solicitation of a bonded joint by thick adherend shear testing ( <b>IAA20_53</b> ) C Perderiset (MINES ParisTech, France), F Georgi, JL Bouvard, P Montmitonnet, A Grunenwald, F Rasselet
14:20	Mechanoluminescent study of local destruction mode on aircraft CFRP-epoxy adhesive sheet assembly ( <b>IAA20_23</b> ) N Terasaki (AIST, Japan), K Takagi	Development of an elasto-plastic meshless technique to analyse bonded structures ( <b>IAA20_67</b> ) I L Sánchez-Arce (INEGI, Portugal), LDC Ramalho, RDSG Campilho, J Belinha

14:40	Towards the local measurement of the adhesion performance of structural bonding by laser shock ( <b>IAA20_24</b> ) N Cuvillier (Safran Tech, France), M Ducouso, MS Bertrand, T Bergara, L Videau, L Berthe	Joint strength improvement using toughened transverse composite adherends ( <b>IAA20_7</b> ) RJC Carbas (INEGI, Portugal), MAMS Pereira, EAS Marques, LFM da Silva
15:00	Surface pre-treatment for painting and bonding in the aerospace industry ( <b>IAA20_33</b> ) S Kreling (Airbus Operations GmbH, Germany), B Langer	Mechanical characterization of graded single lap joints using magnetised cork microparticles ( <b>IAA20_5</b> ) CI da Silva (INEGI, Portugal), AQ Barbosa, JB Marques, RJC Carbas, EAS Marques, J Abenojar, LFM da Silva
15:20	Surface toughening – An industrial approach to increase the robustness of pure adhesive joints with film adhesives ( <b>IAA20_46</b> ) MJ Schollerer (German Aerospace Center, Germany), J Kosmann, D Holztüter, C Bello-Larroche, C Hühne	Bonding of components manufactured by selective laser melting ( <b>IAA20_70</b> ) C Koch, M Kahlmeyer, J Richter, M Vollmer, S Böhm (University of Kassel, Germany), T Niendorf
15:40	Thick adherend shear test specimen - A comparison of DIC and extensometer measurement techniques ( <b>IAA20_47</b> ) J Kosmann (German Aerospace Center, Germany), O Völkerink, MJ Schollerer, D Holztüter, C Hühne	Thermal deformation of adhesively bonded joints of different materials combined with mechanical fasteners ( <b>IAA20_75</b> ) N Okada, Y Sekiguchi, C Sato (Tokyo Institute of Technology, Japan)
<b>16:00-16:20</b>	<b>COFFEE BREAK</b>	
	<b>Session 4A – Surface treatments (Chair: E Dragoni and EJC Kellar)</b>	<b>Session 4B – Automotive industry II (Chair: C Sato and K Kamiyama)</b>
	<b>Room LAGOON I</b>	<b>Room LAGOON II</b>
16:20	Individualized laser beam pre-treatment process for adhesive bonding of a polyamide 6 injection molded fiber-reinforced plastic component under the boundary conditions of automotive industry ( <b>IAA20_39</b> ) J Weiland (RWTH Aachen University, Germany), H Dittmar, D Liedtke, A Birkenstock, B Marx, A Schiebahn, P Jaeschke, L Overmeyer, U Reisgen	Dynamic failure of crash adhesives in an industrial context ( <b>IAA20_41</b> ) B Bourel, F Lauro (University Polytechnique Hauts de France, France), G Haugou, N Leconte
16:40	Effect of surface treatments on adhesive bonding of polyamide and carbon-fiber reinforced thermoplastic (CFRTP) ( <b>IAA20_48</b> ) S Horiuchi (AIST, Japan), H Akiyama, N Terasaki, M Itabashi	Techniques for the mechanical characterization and numerical modelling of the bonded automotive structures under impact loads ( <b>IAA20_8</b> ) EAS Marques (INEGI, Portugal), PDP Nunes, A Akhavan, CSP Borges, RJC Carbas, LFM da Silva
17:00	Ageing effects and influencing factors at boundary surfaces of aluminum	Investigation of environment-friendly, self-customized filaments and its

	adherents in small scale ( <b>IAA20_71</b> ) S Golob (WIWeB, Germany), J Holtmannspötter, A Lion, M Johlitz, M Frauenhofer	interlayer adhesion for Additive Manufacturing ( <b>IAA20_40</b> ) A Richter (Volkswagen Group Innovation, Germany), F Fischer, H Meyer, K Dilger
17:20	Study of adhesion performance of double-layer adhesives ( <b>IAA20_14</b> ) X Yang (University of Science and Technology of China, China), T Wang, Y Zhao	Adhesives for increasing the bonding strength of in situ manufactured metal-composite joints ( <b>IAA20_66</b> ) R Thomas (Volkswagen, Germany), F Fischer, M Gude
17:40	Research progress in numerical simulation of laser treatment of adhesive surface of composite ( <b>IAA20_19</b> ) HK Xiong (Tongji University, China), GQ Yuan	Thermoplastic composite - metal adhesive joining: Static and dynamic behaviours ( <b>IAA20_58</b> ) R Menini (NRC, Canada), S Noormohammed, A Gariépy, D Trudel-Boucher, N Legros
18:00	Laser cleaning and surface preparation in automotive and aeronautics applications – the sustainable way to prepare metal surfaces for adhesive bonding ( <b>IAA20_74</b> ) E Büchter (cleanLASER, Germany)	
19:00	<b>Poster session and RECEPTION</b>	
<b>Studies applicable to various industries</b>		
Poster 1	Effect of residual strains on static strength of dissimilar single lap adhesive joints: an industrial point of view ( <b>IAA20_1</b> )	A Akhavan-Safar (INEGI, Portugal), S Safaei, M Moazzami, MR Ayatollahi, LFM da Silva
Poster 2	Effect of ageing and contamination on the interfacial strength of adhesive joints: An overview ( <b>IAA20_4</b> )	CSP Borges (INEGI, Portugal), A Akhavan-Safar, EAS Marques, RJC Carbas, P Weissgraeber, C Ueffing, LFM da Silva
Poster 3	Study of the influence of microparticles of cork on the fracture type in single lap joints ( <b>IAA20_12</b> )	CI da Silva (INEGI, Portugal), AQ Barbosa, RJC Carbas, EAS Marques, A Akhavan-Safar, LFM da Silva
Poster 4	Shear characterization of structural adhesives under different torsional load rates ( <b>IAA20_6</b> )	RJC Carbas (INEGI, Portugal), EAS Marques, LFM da Silva
Poster 5	Determination of the mode I and mode II fracture toughness of structural adhesives loaded at constant strain rates ( <b>IAA20_9</b> )	EAS Marques (INEGI, Portugal), PDP Nunes, A Akhavan, RJC Carbas, LFM da Silva
Poster 6	Tensile fatigue life prediction of adhesively bonded structures based on CZM technique combined with a modified degradation approach ( <b>IAA20_18</b> )	A Akhavan-Safar (INEGI, Portugal), J Monteiro, R Carbas, E Marques, R Goyal, M El-zein, LFM da Silva
Poster 7	Material and adhesive effect in adhesively-bonded composite step joints ( <b>IAA20_68</b> )	RFN Brito, RDSG Campilho, RDF Moreira, II Sánchez-Arce (INEGI, Portugal)
Poster 8	Functionally graded adhesive joints under	MQ dos Reis, RJC Carbas

	impact loads ( <b>IAA20_76</b> )	(INEGI, Portugal), EAS Marques, LFM da Silva
Poster 9	Numerical modelling of functionally graded adherends ( <b>IAA20_77</b> )	MQ dos Reis, RJC Carbas, EAS Marques (INEGI, Portugal), LFM da Silva
<b>Rail</b>		
Poster 10	A new cohesive element to model environmental degradation of adhesive joints in the rail industry ( <b>IAA20_10</b> )	G Viana, RJC Carbas (INEGI, Portugal), M Costa, MD Banea, LFM da Silva
<b>Civil construction</b>		
Poster 11	Investigation of relation between bond failure energy and bond strength of adhesive joints with steel and composite substrates ( <b>IAA20_38</b> )	B Nečasová (Brno University of Technology, Czech Republic), P Liška, J Šlanhof

<b>Friday 6 March 2020</b>	
	<b>Session 5 – Studies applicable to various industries II (Chair: K Dilger and S Böhm)</b>
	<b>Auditorium SUNRISE</b>
8:40	Aging condition determination of bonded joints by terahertz spectroscopy ( <b>IAA20_17</b> ) A Winkel, J Taiber, M Kahlmeyer, E-M Stübling, S Sommer, M Koch, S Böhm (University of Kassel, Germany)
9:00	Automated removal of CFRP layers for the repair by adhesive bonding ( <b>IAA20_36</b> ) L Brieskorn (Fraunhofer IFAM, Germany), W Hintze
9:20	Effect of adhesive thickness on fatigue properties for single lap bonded joint with different types of acrylic adhesives ( <b>IAA20_45</b> ) Y Ogawa (National Institute for Materials Science, Japan), H Oguma, K Naito
9:40	Is it best to use the Single Lap Joint or the Thick Adherend Shear Test for adhesive shear properties? ( <b>IAA20_63</b> ) RD Adams (University of Oxford, UK)
10:00	How to pretreat CFRP adherends in different scales for structural adhesive bonding ( <b>IAA20_55</b> ) J Holtmannspötter (WIWeB, Germany), F Zimmer, E Arikan, H-J Gudladt
10:20	Verification of a crack growth mechanism on SGA adhesive joints with detailed observation and acoustic emission measurement ( <b>IAA20_16</b> ) K Kamiyama (Mitsubishi Electric Corporation, Japan), M Mikuni, T Matsumoto, S Matsuda, H Kishi
<b>10:40-11:00</b>	<b>COFFEE BREAK</b>
	<b>Session 6 – Marine industry (Chair: H Fricke and RD Adams)</b>
	<b>Auditorium SUNRISE</b>
11:00	Adhesively bonded fastener for the shipbuilding industry ( <b>IAA20_34</b> ) H Kordy (Fraunhofer IFAM, Germany), H Fricke
11:20	Adhesively bonding under water ( <b>IAA20_35</b> ) A Knape (Fraunhofer IFAM, Germany), S Myslicki, M Adam, T Vallée, H Fricke
11:40	Durability of syntactic foam materials for deep ocean in unusual environment ( <b>IAA20_42</b> ) B Liao (Chinese Academy of Sciences, China), K Yan, Z An, S Pan, J Zhang
12:00	Subsequent bonding of brackets to coated surfaces ( <b>IAA20_44</b> ) L Fröck (Fraunhofer IGP, Germany), T Marquardt
12:20	Development of pipe repairs with bonded plate in metallic pipes to low risk services ( <b>IAA20_54</b> ) EM Sampaio, RH da Silva, RM Carneiro (State University of Rio de Janeiro, Brazil) Neto, NR Rohem, VA Perrut
12:40	Rate effect in the fracture toughness of glass fiber reinforced polyurethane ( <b>IAA20_64</b> ) JML Reis (Universidade Federal Fluminense, Brazil), JJM Machado, EAS Marques, RJC Carbas, LFM da Silva
<b>13:00-14:00</b>	<b>LUNCH BREAK</b>

	<b>Session 7 – Various industries (Chair: Y Takahashi and J Holtmannspötter)</b>
	<b>Auditorium SUNRISE</b>
14:00	Application of adhesives in wood industry ( <b>IAA20_50</b> ) M Šernek (University of Ljubljana, Slovenia)
14:20	UV resin bonding for biomedical applications: Experimental and finite element thermo-mechanical analyses ( <b>IAA20_26</b> ) A Spaggiari (University of Modena and Reggio Emilia, Italy), D Castagnetti, E Dragoni
14:40	Printed ultrathin paper sensors in technical applications ( <b>IAA20_25</b> ) U Müller (Wood K plus, Austria), M Hübner, M Kaltenbruner, W Lang, A Mahendran, F Padinger, M Steiner, T Stockinger
15:00	Radio frequency characteristics of silver nanowire embedded within polyimide substrate for transparent and flexible antenna ( <b>IAA20_51</b> ) S-W Kim, K-Y Kim, JH Han, WS Nah, JW Kim, S-B Jung (Sungkyunkwan University, Korea)
15:20	Fatigue behaviour of different industrial adhesives ( <b>IAA20_2</b> ) A Akhavan-Safar (INEGI, Portugal), EAS Marques, R Carbas, J Monteiro, LFM da Silva, M El-Zein, N Cuvillier, I Maus, Y Takahashi, J Sherwood
15:40	Indirect determination of adhesive bond properties – an industrial review ( <b>IAA20_60</b> ) EJC Kellar (TWI, UK)
<b>16:00-16:20</b>	<b>COFFEE BREAK</b>
	<b>Session 8 – Automotive industry III (Chair: P Weißgraeber and S Kreling)</b>
	<b>Auditorium SUNRISE</b>
16:20	Development of a numerical thermochemical model to describe the behavior of an expandable adhesive for industrial application in a multi-material assembly ( <b>IAA20_49</b> ) LM da Silva (ENSTA Bretagne, France), C Cellard, D Debelley, L Sohier, P Colin, R Créac’hadez
16:40	Adhesive solutions for automotive lightweight design ( <b>IAA20_62</b> ) J Que (Sika, Switzerland), M Gutsell
17:00	On the strength of joints of metal-plastic composites of hot-formed steel with an AlSi coating and a thermosetting fibre reinforced compression material ( <b>IAA20_52</b> ) S Wehler (Volkswagen, Germany), P Moritz, F Fischer, M Gude
17:20	Ambient and low-temperature impact performance of bonded joints with different adhesive chemistries ( <b>IAA20_59</b> ) R Menini (NRC, Canada), A Gariépy, S Noormohammed, D Backman, R Desnoyers
17:40	Adhesives and thermal interface materials for automotive battery applications ( <b>IAA20_56</b> ) S Grunder (DuPont, Switzerland), A Lutz, F Koch, N Hillesheim
18:00	
20:00	<b>IAA2020 BANQUET</b>