



## Programme of VBE2025

Author underlined → presenting author

\* Keynote lecture

<b>Thursday 6 November 2025</b>	
8:40	<b>VBE2025 Opening (Room B032)</b>
9:00*	Opportunities and challenges in using high strength steel for structural applications in the off-highway machinery ( <b>VBE25_26</b> ) <u>R Goyal</u> (John Deere, USA)
	<b>Session 1 – Material testing and simulation I (Chair: S Guenther and LFM da Silva)</b>
	<b>Room B032</b>
9:40	HyEnd-Wood – Development of strand-based materials as sustainable alternatives for semi-structural parts ( <b>VBE25_21</b> ) <u>G Piazza</u> (German Aerospace Center, Germany), <u>N Ratsch</u> , C Burgold, DB Heyner
10:00	An analytical framework for predicting long-term behaviour in acrylic PSAs for automotive applications ( <b>VBE25_3</b> ) <u>BD Simões</u> (INEGI, Portugal), EMD Fernandes, EAS Marques, RJC Carbas, S Maul, P Stihler, P Weißgraeber, LFM da Silva
10:20	Bonding zone investigations of injection molded wood-plastic-hybrid components ( <b>VBE25_24</b> ) <u>D Schmidt</u> (Porsche AG, Germany), F Fischer, D Klaiber, A Wagenführ, S Hiermaier
<b>10:40-11:00</b>	<b>COFFEE BREAK (Room under the Auditorium)</b>
	<b>Session 2 – Structural joining methods (Chair: MM Kasaei and X Han)</b>
	<b>Room B032</b>
11:00	Effects of laser pretreatment on adhesive bonding ( <b>VBE25_29</b> ) <u>F Sun</u> (Tongji University, China)
11:20	Exploring damage tolerance in additively manufactured polymeric bolted joints: a path toward industrial integration ( <b>VBE25_33</b> ) <u>P Zamani</u> (Damghan University, Iran), D Ghahremani Moghadam, A Hoseinzadeh
11:40	Effect of temperature and train rate on composite single lap joints with different types of adhesives ( <b>VBE25_11</b> ) <u>RCJ Carbas</u> (INEGI, Portugal), F Ribeiro, EAS Marques, LFM da Silva

12:00	Design insights into the fatigue response of adhesive joints for lightweight automotive structures ( <b>VBE25_1</b> ) FC Sousa, <u>A Akhavan-Safar</u> (INEGI, Portugal) RJC Carbas, EAS Marques, R Goyal, J Jennings, LFM da Silva
12:20	Performance of hybrid adhesive joints for automotive floors under varying loading rates ( <b>VBE25_2</b> ) <u>B Hasumi</u> (Asahi Kasei Corporation, Japan), A Akhavan-Safar, RJC Carbas, EAS Marques, LFM da Silva
12:40	Interfacial stress analysis of structural adhesive joints in lightweight automotive structures ( <b>VBE25_38</b> ) M Shayesteh-Zeraati, SA Yousefsani, <u>M Tahani</u> (Ferdowsi University of Mashhad, Iran)
<b>13:00-14:00</b>	<b>LUNCH BREAK (Room under the Auditorium)</b>
14:00*	Innovative lightweight composite car body shell for a metro train ( <b>VBE25_14</b> ) <u>S Guenther</u> (CG Rail, Germany)
	<b>Session 3 – Road vehicle structural design I (Chair: C David and Y-D Park)</b>
	<b>Room B032</b>
14:40	Failure analysis of tube fit joints for busbar–prismatic cell connections in electric vehicles ( <b>VBE25_6</b> ) VPNC Henriques, <u>MM Kasaei</u> (INEGI, Portugal), RJC Carbas, EAS Marques, LFM da Silva
15:00	An integrated approach to the design and experimental analysis of adhesively bonded vehicle structures ( <b>VBE25_10</b> ) <u>EAS Marques</u> (University of Porto, Portugal), VCMB Rodrigues, BD Simões, A Akhavan-Safar, RJC Carbas, LFM da Silva
15:20	Automated quality evaluation of welding and joining in vehicle bodies using 3D surface profile measurement ( <b>VBE25_25</b> ) <u>Y-D Park</u> (Dong-Eui University, Busan, Republic of Korea)
15:40	Characterization and debonding of sealant adhesives for electric vehicle battery pack lids ( <b>VBE25_15</b> ) <u>VCMB Rodrigues</u> (INEGI, Portugal), MM Kasaei, EAS Marques, RJC Carbas, LFM da Silva
<b>16:00-16:20</b>	<b>COFFEE BREAK (Room under the Auditorium)</b>
	<b>Session 4 – Road vehicle structural design II (Chair: F Fischer and RJC Carbas)</b>
	<b>Room B032</b>
16:20	Potential of lightweight wood ‘Albasia’ in refrigerated trailers and electric vehicles: Design and validation of a side wall and a side sill reinforcement ( <b>VBE25_17</b> ) <u>D Heyner</u> (German Aerospace Center, Germany), T Feser, M Schulze, G Piazza
16:40	Design guidelines for innovative commercial vehicles ( <b>VBE25_18</b> ) <u>A Scattina</u> (Politecnico di Torino, Italy)
17:00	Collaboration between conceptual design phase, CAD-modelling and crash simulation in automotive engineering ( <b>VBE25_23</b> ) <u>C Mallah</u> (German Aerospace Center, Germany), F Schmid, C David

17:20	Influence of structural joints properties in the dynamics of a luxury sports car <b>(VBE25_11)</b> <u>P Millan</u> (IDMEC, IST, Portugal), J Ambrósio, M Kasaei, RJC Carbas, EAS Marques, LFM da Silva
17:40	Generating AI training data for geometry derivation of topology optimized car body structures <b>(VBE25_32)</b> <u>C Gomes Alves</u> (German Aerospace Center, Germany)
18:00	<b>Visit Advanced Joining Processes laboratory of INEGI</b> (meeting in front of room B032 at 18:00, limited to 20 people)
19:00	<b>RECEPTION (Room under the Auditorium)</b>

<b>Friday 7 November 2025</b>	
9:00*	Failure on aeronautical composite structures: Challenges and future perspectives ( <b>VBE25_8</b> ) <u>V Tita</u> (University of São Paulo, Brazil)
	<b>Session 5 – Aeronautical structural design (Chair: V Tita and B Morlet)</b>
	<b>Room B032</b>
9:40	Application of a composite damage model on large aircraft structures ( <b>VBE25_28</b> ) <u>B Morlet</u> (Dassault Aviation, France)
10:00	Multi-scale modelling and hygrothermal ageing of stepped adhesive repairs in CFRP structures ( <b>VBE25_27</b> ) <u>TR Zhu</u> , <u>MT Hu</u> , <u>JH Zhang</u> , <u>X Han</u> (Dalian University of Technology, China)
10:20	Widespread fatigue damage ( <b>VBE25_39</b> ) <u>CE Chaves</u> (Embraer, Brazil)
<b>10:40-11:00</b>	<b>COFFEE BREAK (Room under the Auditorium)</b>
	<b>Session 6 – Material testing and simulation II (Chair: N Peixinho and EAS Marques)</b>
	<b>Room B032</b>
11:00	Development of a material- and process-compatible joining technology for the implementation of bio-based materials in the vehicle structure ( <b>VBE25_19</b> ) <u>P Egbert</u> (Volkswagen, Germany)
11:20	Evaluating stress states in AHSS DP1000: Insights from shear and tension specimen testing ( <b>VBE25_31</b> ) <u>R Pereira</u> (Universidade do Minho, Portugal), <u>N Peixinho</u> , <u>S Costa</u>
11:40	The performance of through-wood single-lap joints bonded with different type of adhesives ( <b>VBE25_12</b> ) <u>RCJ Carbas</u> (INEGI, Portugal), <u>Sh Jalali</u> , <u>EAS Marques</u> , <u>LFM da Silva</u>
12:00	Technical and economic analysis of hybrid flax-carbon fiber composites and their decarbonization potential in automotive applications ( <b>VBE25_20</b> ) <u>T Höbold</u> (Volkswagen, Germany)
12:20	Characterization and debonding of adhesive tapes for prismatic cell-to-cell bonding ( <b>VBE25_16</b> ) <u>VCMB Rodrigues</u> (INEGI, Portugal), <u>EAS Marques</u> , <u>RJC Carbas</u> , <u>LFM da Silva</u>
12:40	Effects of cell rotation on the mechanical performance of additively manufactured lattice structures ( <b>VBE25_40</b> ) <u>H Sadeghian</u> , <u>H Ahmadian</u> (Iran University of Science and Technology, Iran), <u>MR Ayatollahi</u>
<b>13:00-14:00</b>	<b>LUNCH BREAK (Room under the Auditorium)</b>
14:00*	Composites in naval shipbuilding ( <b>VBE25_22</b> ) <u>C Verhaeghe</u> (Damen Naval, The Netherlands)
	<b>Session 7 – Various transport structural design (Chair: C Verhaeghe and A Scattina)</b>
	<b>Room B032</b>
14:40	Aerodynamic analysis of small-scale wing-in-ground effect vehicles for unmanned maritime applications ( <b>VBE25_5</b> )

	<u>A Dreus</u> (Oles Honchar Dnipro National University of Technology, Ukraine), A Aleksieisnko, V Nekrasov, O Khaminich
15:00	AliSa - a next-generation night train, made possible by structural optimisation ( <b>VBE25_30</b> ) <u>N Schmauder</u> (German Aerospace Center, Germany), R Winkler-Höhn, K Ricks, B Brenke
15:20	Structural integrity of selected rail vehicle components ( <b>VBE25_34</b> ) <u>M Leitner</u> (Graz University of Technology, Austria), P Brunnhofer, C Buzzi, K Takehama, T Pertoll, J Torggler
15:40	Assessment of suspension damper malfunctions on the dynamic response of a semi-trailer truck multibody system ( <b>VBE25_35</b> ) <u>LM Visniewski</u> (Federal University of Rio Grande do Sul, Brazil), WJ Paucar Casas
<b>16:00-16:20</b>	<b>COFFEE BREAK (Room under the Auditorium)</b>
	<b>Session 8 – Durability of structures (Chair: A Akhavan-Safar and LFM da Silva)</b>
	<b>Room B032</b>
16:20	Assisted data analysis for engineering diagnostics ( <b>VBE25_37</b> ) <u>E Lindgren</u> (United States Air Force, USA)
16:40	Interfacial failure prediction in acrylic PSA joints: a multi-scale creep study for automotive applications ( <b>VBE25_4</b> ) <u>BD Simões</u> (INEGI, Portugal), EAS Marques, RJC Carbas, S Maul, P Stihler, P Weißgraeber, LFM da Silva
17:00	Comparative analysis of the biodynamic behavior of an optimized multibody vehicle model ( <b>VBE25_36</b> ) <u>JS Vianna</u> (Federal University of Rio Grande do Sul, Brazil), LR Centeno Drehmer, WJ Paucar Casas
17:20	Fatigue behaviour of dissimilar steel-to-aluminium friction stir welds ( <b>VBE25_9</b> ) J Domingos, <u>EAS Marques</u> (University of Porto, Portugal), RJC Carbas, R Beygi, LFM da Silva
17:40	Fatigue life estimation of hybrid busbars joined by hole hemming for electric vehicles ( <b>VBE25_7</b> ) <u>MM Kasaei</u> (INEGI, Portugal), A Akhavan-Safar, RJC Carbas, EAS Marques, LFM da Silva
20:00	<b>VBE 2025 BANQUET (Restaurant Vincci Porta de Ferro)</b>