



Programme of AJP 2025

Author underlined → presenting author

* Plenary lecture

Thursday 16 October 2025			
8:40	AJP 2025 Opening (Room Julieta)		
	Room Julieta		
9:00*	Versatile joining by forming - from vision to reality (AJP25_39) <u>G Meschut</u> (Paderborn University, Germany), M Merklein, A Brosius, M Bobbert		
	Session 1A – Joining by forming I (Chair: PAF Martins and MM Kasaei)	Session 1B – Laser welding I (Chair: K Dilger and U Reisgen)	Session 1C – 6th In-situ workshop I (Chair: T Kannengießer and A Kromm)
	Room Julieta	Room Copelia	Room Gisele
9:40	Enhancing the performance of double-flush riveted joints through hybridization with adhesive bonding (AJP25_19) <u>JMB Alpendre</u> , PMS Rosado, RFV Sampaio, JPM Pragana, IMF Bragança, CMA Silva, <u>PAF Martins</u> (Universidade de Lisboa, Portugal)	Fundamentals of spatter formation in laser keyhole welding of high-alloy steel (AJP25_30) <u>C Diegel</u> (Technische Universität Ilmenau, Germany), L Schmidt, K Schrickler, M Seibold, H Friedmann, P Hellwig, F Fröhlich, F Nagel, P Kallage, A Rack, H Requardt, Y Chen, JP Bergmann	Characteristics of intra-granular microstructure in steel weld metals formed by CO ₂ -shielded high-current buried-arc welding (AJP25_21) <u>H Terasaki</u> (Kumamoto University, Japan), M Tsushida, T Era, H Baba, Y Umemoto, T Takeshima, T Tonan, T Yamaguchi

10:00	Numerical investigation of an orbital forming process to join dissimilar materials with local material accumulation (AJP25_22) <u>A Harms</u> (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany), D Römisch, H Theiss, M Lechner, M Merklein	In situ synchrotron investigations: vapor capillary dynamics and molten pool ejections during laser beam welding of cast aluminum (AJP25_55) <u>P Meyer</u> (Fraunhofer Institute for Laser Technology ILT, Germany), N Wollf, Y Sun, J Brüggengjürgen, C Spurk, M Hummel, A Olowinsky, F Beckmann, J Moosmann, A Häusler, A Gillner	Impact of inadequate repair welding of cast duplex stainless steel on corrosion performance in seawater desalination plants (AJP25_23) <u>KM Hafez</u> (Central Metallurgical Research & Development Institute (CMRDI), Egypt), E El-Shenawy, H Refaie
10:20	Numerical study of the joint strength criteria of metal-polymer joints with combined force- and form-fit (AJP25_89) <u>F Weinert</u> (TU Dortmund University, Germany), F Weber, H Dardaei Joghian, Y P Korkolis, AE Tekkaya	Effect of laser beam oscillation on weld segregation suppression in laser welding of Al-Si coated HPF steel sheets (AJP25_63) <u>CY Lee</u> (Hyundai Steel, South Korea), SH Park, JS Kim, KJ Sohn	Microstructural development of laser-welded Al-Cu overlap joints depending on beam parameters and joint geometry (AJP25_28) H Letsch, RJ Hofmann, K Hoefer, <u>J Hensel</u> (Chemnitz University of Technology, Germany)
10:40-11:00	COFFEE BREAK		
	Session 2A – Advanced joining processes I (Chair: A Astarita and A Brosius)	Session 2B – Adhesive bonding I (Chair: H Fricke and C Sato)	Session 2C – 6th In-situ workshop II (Chair: H Terasaki and A Kromm)
	Room Julieta	Room Copelia	Room Gisele
11:00	Weld solidification cracking susceptibility of dissimilar austenitic weld metals and the influential factors (AJP25_33) <u>K Kadoi</u> (Osaka university, Japan), H Fendong, H Yuyang, S Aoki, S Okano	Advancing adhesive bonding technology through digitalization and industry 4.0 integration (AJP25_40) <u>H Fricke</u> (Fraunhofer IFAM, Germany)	AI-based monitoring system for real-time defect detection in Wire Arc Additive Manufacturing (AJP25_34) <u>JE Tapia-Cabrera</u> (Technical University of Munich, Germany), F Groschupp, MF Zaeh
11:20	Automated crack detection in welds based on induction excited thermography (AJP25_48) <u>M Mund</u> (TU Braunschweig, German), T Krüger, S Hartwig, MW Kandula, K Dilger	Rheological characterization and cyclic creep behaviour of acrylic pressure-sensitive adhesives for advanced joining in automotive applications (AJP25_4)	Reduction of residual stress by narrowing the repair groove: Optimizing repair welding with modern welding processes for high-strength offshore steels (AJP25_50)

		BD Simões (INEGI, Portugal), HC Sousa, EAS Marques, RJC Carbas, S Maul, P Stihler, P Weißgraeber, LFM da Silva	L Reichel (Bundesanstalt fuer Materialforschung und -pruefung (BAM), Germany), A Kromm, D Schroepfer, T Kannengiesser
11:40	On the interpretation of microstructure and mechanical response in butt-welded aluminium 6082 joints under varying cooling conditions (AJP25_56) <u>H Rohani Raftar</u> (LUT University, Finland), A Khodabakhshi, A Ahola, T Skriko	Analytical and numerical optimization of adhesive joint edges under mixed-mode (peel and shear) loading conditions (AJP25_154) <u>H Alshammari</u> (University of South Florida, USA)	Improvement of fatigue resistance through the application of a low-transformation-temperature welding consumable (AJP25_59) <u>M Hübner</u> (Bundesanstalt für Materialforschung und -prüfung (BAM), Germany), F Dittmann, A Kromm, I Varfolomeev, T Kannengiesser
12:00	Concept for sensor-based self-tuning gas metal arc welding process control (AJP25_137) <u>A Biber</u> (RWTH Aachen University, Germany), R Sharma	Influence of manufacturing and testing processes on residual stress distribution in EMC–Silicon bi-materials found in wafer assemblies (AJP25_8) <u>P Maleki</u> (INEGI, Portugal), PFC Videira, A Akhavan-Safar, RJC Carbas, EAS Marques, B Karunamurthy, LFM da Silva	Wire arc additive manufacturing process using CO ₂ as the shielding gas and a high-tensile steel wire (AJP25_61) <u>H Imamura</u> (Kumamoto University, Japan), S Mishiro, K Hara, Y Ohshima, M Ohata, S Maeda, K Ikushima, M Shibahara, H Terasaki
12:20	Model for predicting arc deflection during stud welding (AJP25_69) <u>M Rohe</u> (Technische Universität Ilmenau, Germany), J Hildebrand, JP Bergmann	Mechanical behavior of composite-steel adhesive joints in car floors at various loading rates (AJP25_10) <u>B Hasumi</u> (Asahi Kasei Corporation, Japan), A Akhavan-Safar, RJC Carbas, EAS Marques, LFM da Silva	Motion-induced blur in in situ CT: X-ray image-based evaluation of stress relaxation effects in thermoplastic composite joints (AJP25_68) <u>A Dargel</u> (TUD Dresden University of Technology, Germany), J Troschitz, M Gude, R Kupfer
12:40	Study on the effect of electrically assisted rapid heat treatment on electrically assisted solid-state spot joining of cast aluminum A365-T6 alloy (AJP25_72) <u>VC Phan</u> (University of Ulsan, Republic of Korea), SH Choo, TT Do, TA Bui-Thi, CJ Lee, KS Nam, S-T Hong	Influence of application patterns on adhesive flow in manufacturing bonded joints (AJP25_12) <u>D Garcia</u> (INEGI, Portugal), A Akhavan-Safar, PMS Almeida, RJC Carbas, EAS Marques, J Hrachova, H Leenders, LFM da Silva	Brazing of Sn78Cu22 on aluminum substrates observed via in situ-experiments in a large-chamber SEM (AJP25_79) <u>S Khatmi</u> (RWTH Aachen University, Germany), J Mayer, A Aretz

13:00-14:00	LUNCH BREAK		
	Room Julieta		
14:00*	From the field to the lab and back: Evaluating the integrity of welded components using scaled experiments (AJP25_42) <u>A Kromm</u> (Bundesanstalt für Materialforschung und -prüfung (BAM), Germany)		
	Session 3A – Friction stir welding I (Chair: G Meschut and R Beygi)	Session 3B – Additive manufacturing I (Chair: JPM Pragana and EAS Marques)	Session 3C – 6th In-situ workshop III (Chair: T Kannengießer and D Schroepfer)
	Room Julieta	Room Copelia	Room Gisele
14:40	Friction weldability of 3D printed 316L stainless steel bars (AJP25_138) <u>TM Chmielewski</u> (Warsaw University of Technology, Poland), Ł Morawiński	Microstructural parameters and dislocation density evolution in 316LSi stainless steel fabricated by wire arc additive manufacturing (AJP25_1) <u>B Mehdi</u> (University of Science and Technology Houari Boumediene USTHB, Algeria), S Aberkane, R Badji	In-situ study of phase transformation and precipitate kinetics in Al alloys during solid state materials processing (AJP25_110) <u>CYC Chan</u> (Helmholtz-Zentrum Hereon, Germany), E Mathew, L Rath, H Rana, J Escobar, E Maawad, U Suhuddin, P Staron, JF dos Santos, B Klusemann
15:00	Solid solutioning hindering effect on intermetallic growth: Aluminum-matrix composite reinforced with mechanical-alloyed Ni-Cu powder by friction stir processing (AJP25_46) MB Hesari, <u>R Beygi</u> (Arak University, Arak, Iran), A Bayrami, MZ Mehrizi, EAS Marques, LFM da Silva	Hybrid manufacturing of metallic structures through integration of wire-arc directed energy deposition and resistance welding (AJP25_31) MRF Barros, PMS Rosado, RFV Sampaio, <u>JPM Pragana</u> (University of Lisbon, Portugal), IMF Bragança, CMA Silva, PAF Martins	Influence of ultrasonic-assisted milling on surface integrity of additively manufactured components using MSG processes (AJP25_85) L Engelking, A Eissel, M Madia, <u>D Schroepfer</u> (Bundesanstalt fuer Materialforschung und -prüfung (BAM), Germany), K Treutler, J Kruse, T Kannengiesser, V Wesling
15:20	Effect of tool geometry and material flow characteristics on FSW tool wear (AJP25_47) <u>M Hasieber</u> (Technische Universität Ilmenau, Germany), M Sennewald, M Weigl, JP Bergmann	Post process heat treatment of additively manufactured SS308L using Microwave Hybrid Heating (MWHH) (AJP25_111) <u>JK Jain</u> (Malaviya National Institute of Technology, India), MK Jindal, RK Goyal, Y Koli	The impact of ultrasonic-assisted milling and alloying elements on the surface integrity of additively manufactured iron aluminides (AJP25_87) J Witte, S Dorrani, <u>K Treutler</u> (Bundesanstalt für Materialforschung und -prüfung (BAM),

			Germany), D Schroepfer, T Kannengiesser, V Wesling
15:40	Improving the prediction accuracy of tool damage in friction stir welding by applying experimentally determined S-N curves (AJP25_134) <u>M Sennewald</u> (Technische Universität Ilmenau, Germany), R Eisbrenner, M Hasieber, JP Bergmann	Influence of the wire diameter and metal transfer mode on the bead formation phenomena in wire-arc DED process (AJP25_44) <u>Y Ogino</u> (The University of Osaka, Japan), I Hirota, T Sano	In-situ studies of precipitation kinetics during friction stir welding of AA7075 (AJP25_98) <u>S Henninger</u> (Helmholtz-Zentrum Hereon, Germany), JD Escobar, L Bergmann, JF dos Santos, B Klusemann, P Staron
16:00-16:20	COFFEE BREAK		
	Session 4A – Joining by forming II (Chair: M Merklein and PAF Martins)	Session 4B – Fatigue of joints (Chair: H Remes and A Akhavan-Safar)	Session 4C – Friction stir welding II (Chair: R Beygi and R Sharma)
	Room Julieta	Room Copelia	Room Gisele
16:20	Failure behavior of clinched joints in array arrangements in the shear tensile test (AJP25_29) <u>E Wolf</u> (Dresden University of Technology, Germany), A Brosius	Comparison of the fatigue strength of butt-welded aluminum joints prepared with different welding techniques (AJP25_108) J Havia, <u>A Ahola</u> (LUT University, Finland), T Skrik	A study on the mechanical joining characteristics of hot press forming steel and aluminum using friction element welding technology (AJP25_64) <u>JH Park</u> (Hyundai Steel, South Korea), WR Lee, KJ Shon
16:40	Assessment of contact parameter influence on fatigue-induced wear in clinched joints (AJP25_37) <u>MC Schlichter</u> (Paderborn University, Germany), J-P Ludwig, M Bobbert, G Meschut	Multiaxial fatigue strength of dissimilar arc-welded pin-to-flange joints made of ductile iron and structural steel (AJP25_20) G Meneghetti, <u>A Campagnolo</u> (University of Padova, Italy), A Visentin, S Bolner	Investigation of solid-state layer deposition via friction surfacing with focus on potential applications (AJP25_99) <u>A Roos</u> (Helmholtz-Zentrum Hereon, Germany), Z Kallien, B Klusemann
17:00	Influence of the shank geometry on the joint formation of the versatile self-piercing riveting of ultra-high-strength steel-aluminium and aluminium-aluminium assemblies (AJP25_41)	Effect of burrs on the fatigue strength of metallic structures: experimental study on open hole Ti-6Al-4V specimens with burrs (AJP25_66)	Energy consumption and tool wear in Friction Stir Welding of aluminum alloys (AJP25_112) <u>A Astarita</u> (University of Naples “Federico II”, Italy), E Cozzolino, ATS Silvestri, A Squillace

	<u>PK Kaimann</u> (Paderborn University, Germany), N Ritter, M Bobbert, G Meschut	<u>S Frutos-Taravillo</u> (Airbus Operations SAS, France), E Paroissien, Y Landon, S Schwartz, M Fressinet, C Chirol	
17:20	Classification of defect types in flow drill fastening using a machine learning approach (AJP25_52) <u>A Brinkmann</u> (Paderborn University, Germany), R Beck, G Meschut	Fatigue strength assessment of thin arc-welded steel joints using the Peak Stress Method (AJP25_101) <u>F Coppola</u> (University of Padova, Italy), G Meneghetti	Interaction between friction stir welding and mild steel backing plates: wear mechanisms, material adhesion and resulting weld defects (AJP25_49) <u>A Geldmacher</u> (RWTH Aachen University, Germany), P Rabe, A Schiebahn, U Reisgen
17:40	Transient dynamic analysis: Combination of experimental and numerical approaches to evaluate clinched joints (AJP25_53) <u>G Reschke</u> (TUD Dresden University of Technology, Germany), A Brosius	Quantifying the severity of local undercut on fatigue (AJP25_109) <u>A Niraula</u> (Aalto University, Finland), H Remes	Next-generation aircraft structures enabled by tailored friction stir welding (AJP25_60) <u>M Wagner</u> (Fraunhofer IWS, Germany), A Grimm, A Jahn, D Dittrich, P Mohlau
18:00	Single-stage setting of blind rivet nuts without pre-drilling (AJP25_54) <u>Y Böhm</u> (Paderborn University, Germany), G Meschut	Experimental determination of kinking angles with out-of-phase mixed-mode loading by means of a novel specimen geometry (AJP25_117) <u>S Krome</u> (University Paderborn, Germany), G Kullmer, D Weiß, T Duffe, R Ostwald	Friction stir welding and bobbin tool friction stir welding of AA2219 for aerospace structures (AJP25_133) <u>M Bernardi</u> (Helmholtz-Zentrum Hereon, Germany), L Bergmann, B Klusemann
19:00	Poster session and RECEPTION		
Laser welding			
Poster 1	Experimental optimization and numerical modelling of laser welding parameters for PBT GF30 joints (AJP25_132)	LRR Silva, <u>EAS Marques</u> (University of Porto, Portugal), RJC Carbas, LFM da Silva	
Poster 2	Investigation of laser welding of built-up thin-walled cold-formed steel elements (AJP25_143)	I Hulka, <u>V Ungureanu</u> (Politehnica University Timișoara, Romania), A Pascu	
Poster 3	Comparison of different wavelengths for the laser bonding of conductive tracks on textiles for smart textile applications (AJP25_145)	<u>F Brackmann</u> (Fraunhofer-Institut für Lasertechnik ILT, Germany), L Peters, M Brosda, A Olowinsky	

Friction stir welding		
Poster 4	Enhancing high-temperature durability of aluminum/steel joints: The role of Ni and Cr in substitutional diffusion within intermetallic compounds (AJP25_45)	<u>MB Hesari</u> (Arak University, Iran), R Beygi, TOG Teixeira, EAS Marques, RJC Carbas, LFM da Silva
Poster 5	Fatigue performance of steel-to-aluminium solid state joints (AJP25_36)	<u>EAS Marques</u> (University of Porto, Portugal), J Domingos, RJC Carbas, LFM da Silva
Poster 6	Friction stir spot welded joints for high voltage battery application (AJP25_35)	<u>EAS Marques</u> (University of Porto, Portugal), F Moreira, L Peixoto, R Beygi, RJC Carbas, LFM da Silva
Poster 7	Optimization of rotational speed during friction stir welding of primary and recycled AA6082 for tailor-welded blank applications (AJP25_114)	<u>Y Raajha MS</u> (Norwegian University of Science and Technology, Norway), G Ringen
Poster 8	FSW of high-strength dual phase steel to aluminum AA6061-T6: Enhancing strength and cost-efficiency through buttering (AJP25_141)	<u>R Beygi</u> (Arak University, Iran), MB Hesari, S Ahmadi, EAS Marques, LFM da Silva
Joining by forming		
Poster 9	Disassemblable busbar-to-prismatic cell interconnections for electric vehicles (AJP25_25)	<u>MM Kasaei</u> (INEGI, Portugal), VB Gomes, RJC Carbas, EAS Marques, LFM da Silva
Poster 10	Load path identification for targeted adaption of multiple joint design (AJP25_149)	<u>A Brosius</u> (Technische Universität Dresden, Germany), E Wolf
Poster 11	Forming of asymmetric rivet joints through a versatile self-piercing riveting process with tumbling kinematics (AJP25_151)	<u>J Sarris</u> (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany), M Lechner
Additive manufacturing		
Poster 12	Selective laser sintering of PA-HA powder mixture: A study on non-standard material behavior (AJP25_73)	<u>E Bednarczyk</u> (Warsaw University of Technology, Poland), M Fabijański, Ł Pajchel, J Kolmas, R Grygoruk
Poster 13	Comparison of three controlled short arc variants for WAAM of mild steel parts (AJP25_80)	<u>M Mierzwa</u> (RWTH Aachen University, Germany), PJ Kellerwessel, P Dewald, K Mäde, R Sharma
Poster 14	Numerical and experimental optimization of welded stainless steel liners for lightweight road tank (AJP25_136)	H Aberbach, <u>A Mathieu</u> (Université Bourgogne Europe, France), R Bolot, L Bleurvacq, A Corolleur, F Laurent
Poster 15	Small packet microstructure for forming 3D high strength steel build (AJP25_27)	<u>H Terasaki</u> (Kumamoto University, Japan), K Hayashi

Poster 16	Analytical modeling of temperature fields in directed energy deposition (AJP25_146)	E Wasilewski (Brandenburg University of Technology Cottbus-Senftenberg, Germany), N Doynov, R Ossenbrink, K Schrickner
Poster 17	Process characteristics of wire assisted three-arc tungsten inert gas welding without transferred arc for cladding and additive manufacturing (AJP25_148)	M Smiljanic (Clausthal University of Technology, Germany), K Treutler, V Wesling, R Zierdt, F Schreiber
Poster 18	Wire Arc Additive Manufacturing as a process to build complex-shape capsules for the HIP sintering of powders (AJP25_153)	R Bolot (Université de Bourgogne Europe, France), A Mathieu, H Aberbach, MA Karoui, F Bernard
Adhesive bonding		
Poster 19	Adhesive bonding in veterinary medicine: A review of the latest advancements (AJP25_3)	CMC Ferreira (INEGI, Portugal), BD Simões, EAS Marques, RJC Carbas, LFM da Silva
Poster 20	Mitigating humidity aging in adhesive joints through strategic loading angle design (AJP25_7)	A Akhavan-Safar (INEGI, Portugal), RJC Carbas, EAS Marques, LFM da Silva
Poster 21	Performance of adhesive single lap joints with curved aluminum adherends (AJP25_16)	RCJ Carbas (University of Porto, Portugal), VDC Pires, EAS Marques, LFM da Silva
Poster 22	Thermoplastic adhesives in CFRP joints: An assessment of performance (AJP25_15)	RCJ Carbas (University of Porto, Portugal), EAS Marques, LFM da Silva
Poster 23	Fatigue of adhesive joints: a well-studied yet persistently challenging phenomenon (AJP25_6)	A Akhavan-Safar (INEGI, Portugal), RJC Carbas, EAS Marque, LFM da Silva
Poster 24	Delamination behavior of composite materials repaired with structural adhesives (AJP25_127)	P Vigón, A Argüelles (University of Oviedo, Spain), JA Viña, M Lozano, R García
Poster 25	Development and delamination behavior of adhesive joints in composite structures under extreme environmental conditions (AJP25_128)	P Vigón, JA Viña (University of Oviedo, Spain), R García, A Argüelles, M Lozano
Poster 26	Delamination behavior of adhesive joints in epoxy composites reinforced with glass and carbon fibers: Influence of adhesive type and substrate preparation process (AJP25_129)	P Vigón, R García (University of Oviedo, Spain), A Argüelles, JA Viña, M Lozano
Poster 27	Impact of extreme temperatures on the performance of highly ductile adhesive joints (AJP25_11)	B Hasumi (INEGI, Portugal), A Akhavan-Safar, RJC Carbas, EAS Marques, S Wenig, LFM da Silva
Poster 28	Evaluating peel testing behaviour of acrylic pressure-sensitive adhesives: implications for advanced joining and long-term durability (AJP25_5)	BD Simões (INEGI, Portugal), HC Sousa, EAS Marques, RJC Carbas, S Maul, P Stihler, P Weißgraeber, LFM da Silva

Poster 29	Debonding methods for electric vehicles battery packs (AJP25_17)	VCMB Rodrigues (INEGI, Portugal), EAS Marques, RJC Carbas, LFM da Silva
Poster 30	Effect of substrate closing speed on adhesive flow in manufacturing bonded joints (AJP25_13)	D Garcia (INEGI, Portugal), A Akhavan-Safar, PMS Almeida, RJC Carbas, EAS Marques, J Hrachova, H Leenders, LFM da Silva
Advanced joining processes		
Poster 31	Spot joining of dissimilar automotive structural materials by electrically assisted pressure spot joining (AJP25_71)	S-H Choo (University of Ulsan, Republic of Korea), VC Phan, C Lee, KS Nam, S-T Hong
Poster 32	Methods to ensure the technical cleanliness of an ultrasonic metal welding process (AJP25_81)	J Heine (RWTH Aachen University, Germany), E Helfers, A Schiebahn, U Reisgen
Poster 33	Effect of a post-heat treatment on the microstructure and mechanical properties of GMAW joints of third generation automotive steel (AJP25_152)	JL Hernández Rivera (Universidad Autónoma de San Luis Potosí, México), CG Garay-Reyes, MO Ramos Azpeitia
Hybrid joining		
Poster 34	Comprehensive evaluation of hole-hemmed joints for hybrid busbar interconnections in electric vehicles (AJP25_26)	MM Kasaei (INEGI, Portugal), RJC Carbas, EAS Marques, LFM da Silva
Residual stresses		
Poster 35	Residual stress evaluation using the contour method of an additive manufactured high-strength steel solid cuboid (AJP25_131)	K Wandtke, GA Shabdali, D Schroepfer (Bundesanstalt fuer Materialforschung und -pruefung (BAM), Germany), R Scharf-Wildenhein, A Haelsig, T Kannengiesser, J Hensel

Friday 17 October 2025			
	Room Julieta		
8:40*	Laser welding for the assembly of dissimilar alloys, and wire laser additive manufacturing (AJP25_43) <u>R Bolot</u> (University of Burgundy, France), A Mathieu ¹ , I Tomashchuk ¹ , N Haglon, S Lafaye		
	Session 5A – Laser welding II (Chair: R Bolot and P Jousset)	Session 5B – Hybrid joining (Chair: EAS Marques and MM Kasaei)	Session 5C – Joining by forming III (Chair: A Brosius and CMA Silva)
	Room Julieta	Room Copelia	Room Gisele
9:20	High precision laser micro welding with spot sizes $\leq 15 \mu\text{m}$ (AJP25_95) <u>A Schürmann</u> (Fraunhofer Institute for Laser Technology ILT, Germany), S Backes, A Häusler, A Olowinsky	Development and evaluation of laser-based cleaning strategies for the reuse of stainless steel in plastic-metal hybrid joints (AJP25_77) <u>C Wortmann</u> (Fraunhofer Institute for Laser Technology ILT, Germany), L Stille, M Brosda Flockenhaus, A Olowinsky	Numerical analysis of the robustness of self pierce riveting with pre-formed joining partners (AJP25_58) <u>J-P Ludwig</u> (Paderborn University, Germany), MC Schlichter, M Bobbert, G Meschut
9:40	New method based on experiments and optical simulation for fast and accurate optimized design of laser-welded plastic components (AJP25_122) J Vollenweider, A Franke, R Gronowski, K Hoffmann, B Sadeghian, D Csati, C Wenzlau, <u>P Jousset</u> (Eastern Switzerland University of Applied Sciences, Switzerland)	Improving the load-bearing capacity of clinched joints through cavity filling with structural epoxy adhesive (AJP25_76) <u>DR Devulapally</u> (Paderborn University, Germany), T Tröster	Particle-reinforced aluminium solid self-piercing rivets for joining aluminium alloy sheets (AJP25_62) <u>S Koch</u> (Paderborn University, Germany), J Weber, C Stadelmann, W Böhm, G Meschut, M Merklein
10:00	Investigation of influence of process emission from laser welding of bipolar plates with coatings (AJP25_124) <u>Z Ye</u> (Fraunhofer Institute for laser technology, Germany)	Evaluation of the pull-out performance of metal threaded inserts embedded in thermoplastic fused layer modeling (FLM) structures (AJP25_139) J Troschitz, P Wartschinski, <u>C Vogel</u> (Technische Universität Dresden, Germany), M Pohl, N Modler, M Gude, I Heuzeroth	Combining knowledge and data-driven approaches for an efficient clinch joint parameter design (AJP25_67) <u>J-M Einwag</u> (Friedrich-Alexander Universität Erlangen-Nürnberg, Germany), M Wiemer, S Goetz, S Wartzack
10:20	Reducing noise impact on strain accuracy measurement by optical flow	Thermal direct joining of metal to thermoplastic composites (AJP25_144)	Fundamental analysis of the effects of tool and process parameter variations in

	and DIC for laser welding applications (AJP25_142) V Savitsky, A Gumenyuk, L Schmies, <u>AJ Gumenyuk</u> (Bundesanstalt für Materialforschung und prüfung (BAM), Germany), M Rehtmeier	D Luong, M Hossein, B Foerster, P Goetze, <u>A Klotzbach</u> (KIST + ESCHERICH, Germany), M Langer	shear-clinching of multi-layer sheet metal joints (AJP25_119) <u>J Neumann</u> (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany), M Merklein
10:40-11:00	COFFEE BREAK		
	Session 6A – Advanced joining processes II (Chair: S Zhang and J Hensel)	Session 6B –Adhesive bonding II (Chair: RCJ Carbas and H Fricke)	Session 6C – Residual stresses (Chair: JP Bergmann and TM Chmielewski)
	Room Julieta	Room Copelia	Room Gisele
11:00	Influence of organic, film-like contaminants on ultrasonic metal welding of copper sheets and their in-situ detection (AJP25_86) <u>E Helfers</u> (RWTH Aachen University, Germany), O Stockemer, A Schiebahn, U Reisgen, B Corves	Some theoretical, numerical and experimental results on bonded joints (AJP25_14) C Bauzet, A Bechikh, K Idrissa, S Kikwani, <u>E Lebon</u> (Aix-Marseille University, France), A Maurel-Pantel, C Telloli, R Rizzoni	Effects of global tensile residual stresses on the fatigue strength of welded high-strength steel joints (AJP25_107) K Grönlund, J Riski, <u>A Ahola</u> (LUT University, Finland), T Skriko
11:20	Development of an X-ray camera for electron beam characterization (AJP25_88) <u>T Evers</u> (RWTH Aachen University, Germany), M Gamerdinger, S Olschok	Factory simulation of adhesive bonding processes considering pot life-induced waste (AJP25_155) <u>V Ginster</u> (RWTH Aachen University, Germany), A Weigert, MK Heym, CJA Beier, A Schiebahn, S Galka	Residual stress and distortion control using low transformation temperature effect and welding heat field for high- and low-alloy steels using electron beam welding (AJP25_83) <u>KR Krishna Murthy</u> (RWTH Aachen University, Germany), M Gamerdinger, M Troise, S Olschok
11:40	Investigation on the microstructure and mechanical performance of Sn-Ni TLP joints prepared by microwave hybrid heating (AJP25_93) <u>S Zhang</u> (Harbin Institute of Technology, China), S Zhang, P He	Adhesive bonding technology in automotive battery pack manufacturing and dismantling (AJP25_18) <u>VCMB Rodrigues</u> (INEGI, Portugal), MM Kasaei, EAS Marques, RJC Carbas, LFM da Silva	Influence of double-sided and single-sided T-joints with full connection on welding distortion and its reduction by means of a low-transformation temperature effect in stainless steel (AJP25_75)

			<u>M Gamberdinger</u> (RWTH Aachen University, Germany), <u>KR Krishna Murthy</u> , <u>S Olschok</u>
12:00	Interpretable weld quality prediction in ultrasonic metal welding using change point detection (AJP25_94) <u>O Stockemer</u> (RWTH Aachen University, Germany), <u>E Helfers</u> , <u>E Pinto</u> , <u>A Schiebahn</u> , <u>U Reisgen</u> , <u>B Corves</u>	Improving equine welfare: high performance adhesive films for fast horseshoe attachment (AJP25_2) <u>CMC Ferreira</u> (INEGI, Portugal), <u>BD Simões</u> , <u>EAS Marques</u> , <u>RJC Carbas</u> , <u>LFM da Silva</u>	An efficient thermal analysis method for predicting welding thermal history and distortion (AJP25_106) <u>SC Park</u> (Korea Shipbuilding & Offshore Engineering Co., South Korea), <u>HJ Lee</u> , <u>BK Kang</u> , <u>DJ Lee</u>
12:20	Influence analysis of joining speed on joint formation, binding mechanisms, and joint properties in clinching and self-piercing riveting (AJP25_120) <u>S Lüder</u> (TUD Dresden University of Technology, Germany), <u>HC Schmale</u>	Mechanical testing of battery electrodes by pull-off and peel tests: A comparative study (AJP25_78) <u>H Gruhn</u> (Technische Universität Braunschweig, Germany), <u>A Rajic</u> , <u>M Mund</u> , <u>MW Kandula</u>	Influence of substrate design on properties and residual stresses in hybrid additive manufacturing of high-strength steels using MSG processes (AJP25_84) <u>L Engelking</u> , <u>R Scharf-Wildenhain</u> , <u>D Schroepfer</u> (Bundesanstalt fuer Materialforschung und -prüfung (BAM), Germany), <u>A Haelsig</u> , <u>T Kannengiesser</u> , <u>J Hensel</u>
12:40	Advanced modeling of bolted joints in crash-simulations: Inverse Identification and experimental validation of a surrogate model with LS-DYNA (AJP25_121) <u>S Civatti</u> (Eastern Switzerland University of Applied Sciences, Switzerland), <u>T Zink</u> , <u>F Burbulla</u> , <u>P Jousset</u>	The effect of viscous fingering on the shear properties of structural adhesive joints (AJP25_82) <u>T Gutsch</u> (Technische Universität Braunschweig, Germany), <u>M Griese</u> , <u>E Stammen</u> , <u>K Dilger</u> , <u>S Hartwig</u>	Temperature-induced variations in fracture energy and failure modes of bi-material interfaces in microchip packaging (AJP25_9) <u>P Maleki</u> (INEGI, Portugal), <u>PFC Videira</u> , <u>A Akhavan-Safar</u> , <u>RJC Carbas</u> , <u>EAS Marques</u> , <u>B Karunamurthy</u> , <u>LFM da Silva</u>
13:00-14:00	LUNCH BREAK		
	Room Julieta		
14:00*	Mechanical integrity of interfaces and interconnects in advanced semiconductors (AJP25_38) <u>A Akhavan-Safar</u> (INEGI, Portugal), <u>RJC Carbas</u> , <u>EAS Marques</u> , <u>LFM da Silva</u>		

	Session 7A – Adhesive bonding III (Chair: K Dilger and L Goglio)	Session 7B – Advanced joining processes III (Chair: TM Chmielewski and M Gude)	Session 7C – Additive manufacturing II (Chair: A Mathieu and R Bolot)
	Room Julieta	Room Copelia	Room Gisele
14:40	Fiber-reinforced adhesives - Analysis, simulation and modification of their anisotropic properties (AJP25_90) <u>J Philipp</u> (Technische Universität Braunschweig, Germany), E Stammen, K Dilger	Comparison of ultrasonic and resistance welding of CF-PEEK for high temperature applications (AJP25_96) <u>W Koshukow</u> (Technische Universität Dresden, Germany), B Prakash, J Troschitz, A Danicek, M Gude	Effects of the re-usage of super-duplex stainless steel powder in DED-Laser process (AJP25_65) <u>K Hoefer</u> (Chemnitz University of Technology, Germany), R Rimpl, J Hensel
15:00	Modelling the mechanical performance of structural adhesive layers with process-induced viscous fingers using mesh-based and material-based approaches (AJP25_91) <u>M Griese</u> (Technische Universität Braunschweig, Braunschweig, Germany), E Stammen, K Dilger	Welding process parameter determination using parameter gradients (AJP25_100) <u>MS Freidhofer</u> (Technical University of Munich, Germany), F Riegger, MF Zaeh	Comparative study of microstructure, tensile strength and corrosion resistance of 316L stainless steel produced via novel RSAM and conventional WAAM processes (AJP25_74) <u>IA Soomro</u> (Mehran University of Engineering and Technology Jamshoro, Pakistan), F Abro, N Laghari
15:20	The battery breathing effect and its influence on adhesive layers in structural battery packs (AJP25_92) <u>M Griese</u> (Technische Universität Braunschweig, Braunschweig, Germany), E Stammen, K Dilger	High temperature mechanical characterization of dissimilar steel A-TIG weld joint (AJP25_103) <u>G Sharma</u> (KIET Group of Institutions, India), P Sharma, D K Dwivedi	Comparison of three controlled short arc variants for WAAM of mild steel parts (AJP25_80) <u>M Mierzwa</u> (RWTH Aachen University, Germany), PJ Kellerwessel, P Dewald, K Mäde, R Sharma
15:40	Preparation of specimens for measuring static and impact strength of adhesively bonded joints under combined stress conditions (AJP25_115) <u>A Hayato</u> (Institute of Science Tokyo, Japan), K Ikeda, Y Sekiguchi, C Sato	Detection of thermomechanical phases in ultrasonic welding of copper by acoustic emissions (AJP25_112) <u>K Ehlich</u> (Technische Universität Ilmenau, Germany), CE Ardic, S Kodera, PN Mayekar, M Hasieber, F Römer, JP Bergmann	Influence of surface morphology on joint properties of additively manufactured stainless steel and CF-PEEK (AJP25_97) <u>F Lehmann</u> (TUD Dresden, Germany), J Troschitz, P Grimm, JK Hufenbach, M Gude
16:00- 16:20	COFFEE BREAK		

	Session 8A – Adhesive bonding IV (Chair: LFM da Silva and P Jousset)	Session 8B – Additive manufacturing III (Chair: JP Bergmann and R Bolot)	Session 8C – Polymer joining (Chair: B Cosson and C Garnier)
	Room Julieta	Room Copelia	Room Gisele
16:20	Adhesive joint fatigue monitoring by zero strain point and optical fibres (AJP25_150) <u>M Abbasi</u> , <u>R Ciardiello</u> , <u>L Goglio</u> (Politecnico di Torino, Italy)	Influences of electrodes arrangement and current distribution in WAAM by arc-driven metal jet (AJP25_51) <u>R Furukubo</u> (The university of Osaka, Japan), <u>Y Doi</u> , <u>K Hazama</u> , <u>Y Sato</u> , <u>T Sano</u> and <u>Y Ogino</u>	Towards robust sequential ultrasonic welding of thermoplastic composites with integrated and loose energy director (AJP25_24) <u>A Korycki</u> (LGP-ENIT-UTTOP, France), <u>C Garnier</u> , <u>F Chabert</u> , <u>F Carassus</u> , <u>T Djilali</u>
16:40	Optimizing bond strength between cast metal crowns and metal post-and-core restorations (AJP25_118) <u>W Świrszcz</u> (Warsaw University of Technology, Poland), <u>E Bednarczyk</u> , <u>C Senderowski</u>	Post process heat treatment of additively manufactured Inconel 82 using Microwave Hybrid Heating (MWHH) (AJP25_105) <u>Y Koli</u> (Malaviya National Institute of Technology, India), <u>P Sharma</u> , <u>S Kumar</u> , <u>S Aravindan</u>	Toward reliable prediction of the mechanical strength of 3D printed parts using machine learning (AJP25_32) <u>AC Akué Asséko</u> (University of Lille, France), <u>SL Ndiaye</u> , <u>A Leroy</u> , <u>B Cosson</u>
17:00	Analyzing the response of the degradable adhesive layer between FRP and concrete (AJP25_130) <u>T Zhelyazov</u> (Bulgarian Academy of Sciences, Bulgaria), <u>ER Thorhallsson</u> , <u>JT Snaebjornsson</u>	Processing of copper-zinc alloys with wire and arc-based additive manufacturing technologies (AJP25_116) <u>M Schop</u> (Technische Universität Dresden, Germany), <u>M Schäfer</u> , <u>T Ungethüm</u> , <u>HC Schmale</u>	Preliminary studies of layers of selected metallic powders deposited using the Cold Spray method onto polyamide substrates (PA2201) (AJP25_57) <u>E Bednarczyk</u> (Warsaw University of Technology, Poland), <u>R Grygoruk</u> , <u>M Bajkowski</u> , <u>F Kagankiewicz</u> , <u>T Chmielewski</u>
17:20	Novel temperature resistant adhesives and numerical design methods for next generation sandwich structures in electric buses and railway vehicles (AJP25_123) <u>K Hoffmann</u> (Eastern Switzerland University of Applied Sciences, Switzerland), <u>C Heusser</u> , <u>S von Manitus</u> , <u>L Marugg</u> , <u>S Civatti</u> , <u>M Karcher</u> , <u>M Hartwig</u> , <u>P Jousset</u>	Wire arc additive manufacturing of CNT coated AISI316L stainless steel (AJP25_104) <u>P Sharma</u> (Indian Institute of Technology Delhi, India), <u>S Aravindan</u> , <u>K Meena</u>	Modelling metallic pin pressing process in fibre reinforced thermoplastics on meso scale (AJP25_70) <u>B Gröger</u> (TUD Dresden University of Technology, Germany), <u>J Gerritzen</u> , <u>A Hornig</u> , <u>M Gude</u>

17:40	Environmental degradation effects on mode I fatigue behavior of CFRP adhesive joints (AJP25_126) <u>P Vigón</u> (University of Oviedo, Spain), A Argüelles, R García, JA Viña	Linear support structures made of glass using additive manufacturing (AJP25_125) F Hesse, <u>A Herrmann</u> (Technische Universität Ilmenau, Germany), J Hildebrand, JP Bergmann	Experimental investigation of induction welding for hybrid joining of thermoplastic composites and DP600 steel (AJP25_102) <u>K Boukhadra</u> (ESTACA, France), Z Jendli, J-C Walrick, R Zouaghi, A Kouadri-Henni
18:00	Machine learning-driven prediction of failure load in anodized Al-PU adhesive joints via data fusion (AJP25_147) <u>U Bakhbergen</u> (Nazarbayev University, Kazakhstan), A Maged, M Moldabayeva, S Araby	Parametric study and experimental characterization of 316LSi stainless steel produced by WAAM-CMT process (AJP25_135) H Aberbache, <u>A Mathieu</u> (Université Bourgogne Europe, France), R Bolot, MA Karoui	Local in-situ functionalization of large-format additive manufacturing components using mobile injection molding technology (AJP25_140) J Troschitz, <u>M Pohl</u> (Technische Universität Dresden, Germany), C Vogel, E Mischorr, A Liebsch, N Modler, M Gude, M Stegelmann, M Krah
20:00	AJP 2025 BANQUET (Quinta das Lágrimas)		