Program

Monday, 31 March 2025

18:00	**Welcome reception**

Tuesday, 01 April 2025 (morning)

8:30	**Registration**	
9:00	**Opening ceremony**	
9:20	**Keynote: Volkswagen AG** Taking Autonomous Driving from vision to reality *Tino Fuhrmann, Christian Schübeler*	
9:50	**Change to sessions**	
	Forming	**Simulation**
10:10	Folding Pre-shaped Blanks *David Evans and Julian Allwood*	A Novel Hybrid Hot Forming Process Concept for High Strength Aluminum Alloys *Naveen Krishna Baru, Tobias Teeuwen, David Bailly and Emad Scharifi*
10:35	A first approach towards in-line shape monitoring and control in flexible roll forming automotive components *Abdelrahman Essa, Buddhika Abeyrathna, Bernard Rolfe, Li Yu and Matthias Weiss*	Modeling of notch effects due to multi-material joints in automotive body components for crash applications *Philipp Bähr, Silke Sommer and Gerson Meschut*
11:00	A Study of Beak Geometries for Achieving Pure Shear Deformation in Folding-Shearing *Rishabh Arora, Omer Music and Julian Allwood*	Cross-Process Damage Modeling: A Process-Chain Case Study of Clinching and Self-Pierced Riveting for Aluminum Connections *Özcan Harabati, Christian Roman Bielak, Max Böhnke, Malte Christian Schlichter, Marc Brockmeier, Mathias Bobbert and Gerson Meschut*
11:25	Potential of Part Quality Monitoring for Deep Drawing Processes by Integrating Sensors into Drawbeads *Papdo Tchasse, David Briesenick, Kim Rouven Riedmüller and Mathias Liewald*	Numerical and experimental investigation on full backward extrusion process in forming of pins from DC04 coil *Keyu Luo, Marion Vogel and Marion Merklein*
11:50	**Lunch**	

Program

Tuesday, 01 April 2025 (afternoon)

13:00	**Keynote: thyssenkrupp Steel Europe AG** Sustainable Steel Production and Application *Amalia Koletti, Fabian Botz and Thomas Flöth*	
13:30	**Change to sessions**	
	Incremental forming	**Machine learning**
13:40	Supporting toolpath generation for double sided incremental forming of polyhedron parts *Hans Vanhove, Arnoud Van Hees and Joost Duflou*	Impact of the Parameter Distribution on the Predictive Quality of Metamodels for Clinch Joint Properties *Jonathan-Markus Einwag, Stefan Goetz, Sandro Wartzack and Yannik Mayer*
14:05	Revisiting Formability Limits in Incremental Sheet Forming *Margarida Gralha, Bernardo Colaço, João Pedro Magrinho, Énio Chambel and M. Beatriz Silva*	Transient Dynamic Analysis: Performance Evaluation of Tactile Measurement *Gregor Reschke and Alexander Brosius*
14:30	SPIF accuracy improvement by FEM analysis of multi-step tool trajectories with experimental validation *Cristian Cappellini, Claudio Giardini and Sara Bocchi*	Predicting and Identifying Factors Affecting Sheet Metal Bending Times Using Explainable AI *Alp Bayar, Johan Joubert and Joost R. Duflou*
14:55	Investigating intermediate shapes for multi-stage forming of cranial implants: the influence of two intermediates stages *Marthe Vanhulst and Joost R. Duflou*	ML modeling of a deep drawing process for predicting resulting component properties after springback *Jonas Neumann, Umang Bharatkumar Ramaiya and Marion Merklein*
15:20	**Coffee break**	
	Joining	
15:30	SE Analysis as a Tool for Forming and Medical Technology *Sinan Yarcu, Bernd-Arno Behrens, Sven Huebner and Serdar Yalcin*	
15:55	In situ Computed Tomography – Analysis of Settling Effects During Single-Lap Shear Tests with Clinch Points *Daniel Köhler, Juliane Troschitz, Robert Kupfer and Maik Gude*	
16:20	Investigation on manufacturing-induced pre-deformation on the fatigue behaviour of clinched joints *Malte Christian Schlichter, Özcan Harabati, Max Böhnke, Christian Roman Bielak, Mathias Bobbert and Gerson Meschut*	
16:45	**End of sessions**	
18:30	**Evening event**	

Program

Wednesday, 02 April 2025 (morning)

9:00	**Keynote: NIO Technology (Anhui) Co., Ltd.** Challenges to Sheet Metal Forming Technology Brought by Development of Electric Vehicle Industry *Shengxiang Liu*	
9:30	**Change to sessions**	
	Characterization	**Polymers and composites**
9:40	Evaluating the joinability of aluminium 2024 T351 for aerospace structures using aluminium solid self-piercing rivets *Felix Holleitner, Knuth-Michael Henkel and Normen Fuchs*	Joining process for fiber-reinforced thermoplastics and sheetmetal without additional adhesion promoter *Jörn Wehmeyer, Bernd-Arno Behrens, Sven Hübner and Annika Raatz*
10:05	Experimental Investigations on a Process Adapted Material Testing Method for Hydroforming of Tubular Components *Jonas Reblitz and Marion Merklein*	Efficient Failure Information Propagation under Complex Stress States in Fiber Reinforced Polymers: From Micro- to Meso-scale using Machine Learning *Johannes Gerritzen, Andreas Hornig and Maik Gude*
10:30	Processing of the hypoeutectic AlSi9 alloy with Twin-roll casting by using copper shells *Moritz Neuser, Kay-Peter Hoyer and Mirko Schaper*	Modeling approaches for the decomposition behavior of preconsolidated rovings throughout local deformation processes *Benjamin Gröger, Johannes Gerritzen and Maik Gude*
10:55	The Effect of Height to Diameter Ratio at Stack Compression Tests on Biaxial Yield Stress *Martin László Kölüs and Gábor József Béres*	Combination of metal forming and injection moulding in one tool *Juliane Troschitz, Sven Bräunling, Matthias Kahl, Frank Schneider, Thomas Krampitz, Robert Kupfer, Maik Gude and Alexander Brosius*
11:20	**Coffee break**	
	Welding and additive manufacturing	**Simulation**
11:40	Influence of Liquid metal embrittlement on load-bearing capacity of resistance spot welds under crash loads: A study based on S-Rail Components *Keke Yang, Max Biegler, Linus Happe, Marius Striewe, Viktoria Olfert, David Hein, Michael Rethmeier and Gerson Meschut*	Modelling Strategies for Non-Rotationally Symmetric Joints *Deekshith Reddy Devulapally and Thomas Tröster*
12:05	Joining by forming of hybrid busbars using wire-arc additive manufactured rivets *João P.M. Pragana, Rui F.V. Sampaio, Ivo M.F. Bragança, Carlos M.A. Silva and Paulo A.F. Martins*	Influence of thermal effects on clinch joining of sheet metal *Johannes Friedlein, Paul Steinmann and Julia Mergheim*
12:30	A numerical model to study the temperature and residual stress profiles in hybrid additive manufacturing *Gaetano Pollara, Dina Palmeri, Gianluca Buffa and Livan Fratini*	High-Cycle Fatigue Testing and Parameter identification for Numerical Simulation of Aluminum Alloy EN AW-6014 *Chin Chen, Malte Christian Schlichter, Sven Harzheim, Martin Hofmann, Mathias Bobbert, Gerson Meschut and Thomas Wallmersperger*
13:00	**Lunch**	

Program

Wednesday, 02 April 2025 (afternoon)

14:00	**Keynote: Heggemann AG** Next-Generation Hot Forming of Titanium Alloys: Process Innovations for the Aerospace Industry *Jan Wesendahl*
14:30	**Change to sessions**
	Forming
14:40	Consideration of residual stresses and damage in the fracture mechanical investigation of mechanically joined structures *Deborah Weiß, Tobias Duffe, Tintu David Joy and Gunter Kullmer*
15:05	Inverse parameter identification for the delamination behaviour of metal-polymer-metal sandwich materials *Moritz Kuhtz, Jonas Richter, Andreas Hornig and Maik Gude*
15:30	A Dieless Nakajima Test for Additively Deposited Materials *Rui F.V. Sampaio, Pedro M.S. Rosado, João P.M. Pragana, Ivo M.F. Bragança, Chris V. Nielsen, Carlos M.A. Silva and Paulo A.F. Martins*
15:55	**Coffee break**
	Characterization
16:05	Cost-effective repair solution for Twin-Roll-Caster rollers *Martin Lauth, Kay-Peter Hoyer, Mirko Schaper and Winfried Graefen*
16:30	Influence of the sampling procedure on the mechanical forming limits in the characterization of sheet metal foils *Jan Sommer, Max Meerkamp, Martina Müller, Tim Herrig and Thomas Bergs*
16:55	**End of sessions**
19:00	**Conference dinner**

Program

Thursday, 03 April 2025 (morning)

9:00	**Keynote: KU Leuven** The Performance and Potential of Sheet Metal Working in a Circular Economy *Prof. Dr. ir. Joost Duflou*	
9:30	**Change to sessions**	
	Sustainability	**Welding and additive manufacturing**
9:40	The assessment of heavy-duty laser cutting efficiency and environmental impact through different optical setup *Masoud Kardan, Brent Hendrickx and Joost R. Duflou*	Effect of Process Parameters on Local Thickening of Mg-Zn-Zr Alloy Sheets in TIG Welding *Ecem Özden, Oleksandr Kurtov, Hans Vanhove and Joost R. Duflou*
10:05	Experimental Analyses of Lubricant Reduction in an Industrial Progressive Tool *Eugen Stockburger, Leonard Kürbis and Margarethe Nickel*	Local adaptation of aluminum blanks through laser de-alloying and wire alloying *Marcel Stephan, Henrik Zieroth, Simona Samland, Dominic Bartels, Marion Merklein and Michael Schmidt*
10:30	**Coffee break**	
	Joining	
10:40	Investigation failure behavior in the shear tensile test with respect to the arrangements of clinched joints Eugen Wolf and Alexander Brosius	
11:05	Non-destructive testing in versatile joining processes *Michael Lechner, Thomas Borgert, Matthias Busch, Arnold Harms, Pia Holtkamp, Fabian Kappe, David Römisch and Simon Wituschek*	
11:30	Analysis of the binding mechanisms depending on versatile process variants of self-piercing riveting *Stephan Lüder, Pia Katharina Holtkamp, Simon Wituschek, Mathias Bobbert, Gerson Meschut, Michael Lechner and Hans Christian Schmale*	
12:00	**Conference closure**	
12:20	**Lunch**	
15:00	**End of Conference**	