

Time	Wednesday 24.04.24						
8:00	Registration (Pierre Baudis convention center)						
8:30	Opening ceremony (Saint Exupéry Auditorium)						
9:30	KN1 (Saint Exupéry Auditorium) Energy efficient thermoset composite manufacturing processes Prof. Véronique Michaud						
10:10-10:30	Coffee break (Foyer Ariane)						
Room	Saint Exupéry Auditorium	Ariane 1	Spot	Ariane 2	Argos	Guillaumet 1	Guillaumet 2
MS	MS01	MS05	MS07	MS10	MS02	MS12	MS08
Chairs	Dermot Brabazon	Sam Coppieters	Giusy Ambrogio	Domenico Umbrello and Francois Ducobu	Pierpaolo Carlone	Benjamin Klusemann and Marc Bernacki	Gianluca Buffa
10:30-10:50	Numerical and experimental studies of the molten pool phenomena influence on dissimilar materials coatings by SLM Amaury Jacquot , Adriana Soveja, Yannick Le Maoult, Christine Boher, Manuel Marcoux and Christophe Escape	Insights from crystal-plasticity-based predictions on deformation of an Mg10Gd extrudate Dirk Steglich , Youngung Jeong and Mohammad Omar Andar	Shear cutting: Model-based prediction of material parameters based on synthetic process force signals Matthias Riemer , Katja Silbermann, Dominic Langhammer, Verena Kräusel and Agnes Koschmider	Combining experimental and FEM approaches to determine the influence of work-piece temperature on fundamental variables in the machining process Gorka Ortiz-de-Zarate , Iñaki M. Arrieta, Denis Soriano, Ainara Oruna, Daniel Soler and Pedro J. Arrazola	Basic characterization of the CF-PEKK prepreg and laminates for low temperature applications Purith Polnikorn , Philippe Olivier, Bruno Castanié and Bernard Douchin	Comparative study of physics-informed neural network and artificial neural network application in sheet metal forming Francesco Munzone , Javad Hazrati, Wouter Hakvoort and Tom Van den Boogaard	Experimental work on friction riveting process of Ti6Al4V in a CNC machine Irène Tan , Guillaume Cohen, Anna-Carla Araujo and Alain Daidié

10:50-11:10	Influence of spatter powder on IN939 parts produced by laser powder bed fusion Merve Nur Dogu, Mustafa Alp Yalcin, Seren Ozer, Kemal Davut, Hengfeng Gu and Dermot Brabazon	A general forming limit framework for conventional and modern metals Junhe Lian	Material-data-driven prediction of sheared surface tears of fine blanked parts Lucia Ortjohann, Marco Becker, Philipp Niemiets and Thomas Bergs	The effect of cryogenic assistance on the machinability of Ti54M and energetic approach Imane El Hattimi, Vincent Wagner and Gilles Dessein	Rheological characterisation and modelling of a glass mat reinforced thermoplastic for the simulation of compression moulding Philipp Althaus, Hendrik Wester, Daniel Rosenbusch and Bernd-Arno Behrens	Fast prediction of the material displacement in open die forging using neural networks Nikhil Vijay Jagtap, Niklas Reinisch and David Bailly	Form-based manufacturing of aluminum and steel auxiliary joining elements as the basis for an efficient joining operation Thomas Borgert, Ansgar Nordieker, and Werner Homberg
11:10-11:30	On the scalability of strength and presumed size effects in SLM-produced 316L stainless steel Dmitry Vysochinskiy and Ole-Bjørn Moe	Inverse estimation of material model parameters using Bayesian data assimilation method Akinori Yamanaoka, Michihiko Suda, Sae Sueki, Kengo Sasaki and Ryuki Funamoto	Neural network-based estimation and compensation of friction for enhanced deep drawing process control Sebastian Thiery, Mazhar Zein El Abdine, Jens Heger and Noomane Ben Khalifa	A numerical approach to assess the effect of a cutting fluid on tool wear when machining AISI 1045 steel Grégory Methon, Cédric Courbon, Frédéric Espinoux, Richard Frelechoux and Joel Rech	Thermoplastic pultrusion of recycled PET matrix composites Fausto Tucci, Felice Rubino, Vitan-tonio Esperto and Pierpaolo Carlone	Novel approach for data-driven modeling of multi-stage straightening and bending processes Henning Peters, Eugen Djakow, Tim Rostek, Andreas Mazur, Ansgar Trächtler, Werner Homberg and Barbara Hammer	The continuous fibre injection process (Cfip): A novel approach to lightweight design of multi-material structural components Marc Crescenti, Irene Ràfols, Antoni Lara and Daniel Casellas

11:30 - 11:50	Improving the structural integrity of challenging to manufacture LPBF components with toolpath correction Felix Jensch, Katharina Eissing, Marcus Trautmann, Omar Fergani, Sebastian Härtel, Richard Williams, Yitong Yang and Sergej Dubinin	Pre-strain correction of forming limit curves Holger Aretz	Investigation of the stress state around the forming zone during the flow forming process Buğra Cebiroğlu, Emre Özasan, Ali Yetgin and Bülent Acar	Identification of friction coefficient between uncoated carbide tool and Ti-6Al-4V alloy under different lubrication conditions Achraf Fersi, Yessine Ayed, Bruno Lavisse and Germain Guénaël	Estimation of intimate contact of the fusion-bonded fiber reinforced thermoplastic composites Jiakuan Zhou, Frederik Desplentere and Jan Ivens	Accurate 3D modeling of laser-matter interaction in the AFP process by a conductive-radiative FEM approach Bruno Storti, Adrien Le Reun and Steven Le Corre	Forming of mechanically interlocked aluminium and carbon fibre reinforced polymer parts with complex geometry Núria Latorre Lázaro, Daniel Casellas Padró, Josep Costa Balanzat, Eduard Garcia-Llamas and Jaume Pujante
11:50 - 12:10	Influence of remelting lasing strategies on the fracture toughness of Hastelloy X manufactured by laser powder bed fusion Clément Keller, Benoit Vieille and Amandine Duchaussoy	Bending of third generation steel: Experimental and numerical approach Gabriela Vincze, Catarina Pereira, Pedro Prates and Marilena Butuc	Effects of machine hammer peening on case-hardened 16MnCr5 gear analogue shafts Mohammad Dadgar, René Greschert, Martina Müller, Sebastian Sklenak, Tim Herzig, Jens Brimmers and Thomas Bergs	Digital image processing algorithm for industrial on-site roughness evaluation in Ti-alloy machining Silvia Daniela Ribeiro Carvalho, Anna Carla Monteiro Araujo, Ana Horovistiz and João Paulo Davim	Composite forming post-manufacture: reducing complexity and de-risking manufacture Dominic Palubiski, Marco Longana, Janice Dulieu-Barton, Ian Hamerton and Dmitry Ivanov	Numerical investigation of the effects of process parameters on forming load and failure in hot nosing process Huseyin Tursun, Emre Ozasan, Ali Yetgin and Bulent Acar	Non-rotationally symmetric joints – Mechanisms and load bearing capacity Deekshith Reddy Devulapally, Sven Martin and Thomas Tröster
12:10 - 12:30	An experimental study of effect of printed thickness on the mechanical properties of LPBF produced AISi10Mg Pouya Fahimi, Dmitry Vysochinskiy and Mikhail Aleksandrovich Khadyko	Rope-driven biaxial tensile testing apparatus with specified load ratio Hideo Takizawa and Kazuto Fujiya	Experimental and Finite Element investigation on the effect of process parameters in incremental forming of polymeric materials Ihab Ragai, Gianluca Buffa, Andrea Vandalini and Livan Fratini	Milling of nickel-based superalloys using throttle cryogenic cooling and micro-lubrication Asif Iqbal, Jannis Saelzer, Malik Muhammad Nauman and Dirk Biermann	A solid-beam approach for mesoscopic analysis of textile reinforcements forming simulation Baptiste Lacroix, Julien Colmars, Auriane Platzer, Naim Naouar, Emmanuelle Vidal Salle and Philippe Boisse	A Strategy for minimizing the computational time of simulations involving near-surface embossing of sheet metal materials Pascal Heinzelmann, Marcel Görz, Kim Rouven Riedmüller and Mathias Liewald	Assessments of staked hybrid joints made by studs 3D printed at different manufacturing conditions Romina Conte, Francesco Gagliardi, Giuseppina Ambrogio and Luigino Filice

12:30 - 12:50	An experimental investigation into tribological behavior of additively manufactured biocompatible Ti-6Al-4V alloy <i>Nikolaos Karkalos, Panagiotis Karmiris-Obratanski, Emmanouil Papazoglou, Ilias Georgakopoulos-Soares, Angelos Markopoulos and Marcin Madej</i>	Influence of the forming pre-strain on the fatigue performance of up-set bulge formed tubes <i>Jan Bechler, Florian Weber, Tose Bulzakowski, Jörg Völlmecke, Hosen Sulaiman and A. Erman Tekkaya</i>	Formability analysis of incrementally hole-flanged parts using different tool sizes <i>Marcos Borrego-Puche, David Palomo-Vázquez, Domingo Morales-Palma, Andrés J. Martínez-Donaire, Ana Rosa-Sainz, Gabriel Centeno and Carpóforo Vallellano</i>	Innovative cryogenic processing for enhanced surface integrity characteristics of stainless steels <i>Ozhan Kitay and Yusuf Kaynak</i>	Considering the viscoelastic material behavior in a solid-shell element for thermoforming simulation <i>Johannes Mitsch, Bastian Schäfer, Jan Paul Wank and Luise Kärger</i>		Investigation of rotational friction welding for C22.8 - 41Cr4 joints by using a substitute model <i>Norman Mohnfeld, Johanna Uhe, Hendrik Wester and Armin Piwek</i>
12:50 - 14:00	Lunch break						
14:00	KN2 (Saint Exupéry Auditorium) Graph-based Modeling for Integrated Design and Manufacturing: What could be the benefits of a graph-based approach for manufacturing? Prof. Eric Coatanea						
Room	Saint Exupéry Auditorium	Ariane 1	Spot	Ariane 2	Argos	Guillaumet 1	Guillaumet 2
MS	MS01	MS05	MS07	MS10	MS02	MS12	MS08
Chairs	Merve Nur Dogu	Tudor Balan	Giusy Ambrogio	Takashi Matsumura	Luise Karger	Lukasz Madej and Celal Soyarslan	Hinnerk Hagenah

14:40 - 15:00	Impact of heat treatment cycles on work hardening characteristics in Selective Laser Melted Ti6Al4V alloy <i>Mahendra Sukre and Anil Meena</i>	From strain to stress using full-field data: Computationally efficient stress reconstruction <i>Miroslav Halilovič, Bojan Starman and Sam Coppieters</i>	Numerical analysis of flanging using tailored rubber pad forming on AA7075-O sheets <i>Marcos Borrego-Puche, David Palomo-Vázquez, Domingo Morales-Palma, Andrés J. Martínez-Donaire, Ana Rosa-Sainz, Gabriel Centeno and Carpóforo Vallellano</i>	Influence of the bond properties on the profiling behaviour of bronze bonded graded diamond grinding wheels <i>Daniel Raffalt, Benjamin Bergmann and Berend Denkena</i>	Strain gradient calculation as a basis for localized roving slip prediction in macroscopic forming simulation of non-crimp fabrics <i>Jan Paul Wank, Bastian Schäfer, Johannes Mitsch and Luise Kärger</i>	Full field continuous dynamic recrystallization simulations considering precipitates evolutions with DIGIMU® <i>Pascal De Micheli, Karen Alvarado, Victor Grand and Marc Bernacki</i>	Influence of cold rolled surface structures with undercuts for interlocking joints on bending processes <i>Aron Ringel and David Bailly</i>
15:00 - 15:20	Effect of SiC addition on processability of AISI S2 tool steel for Laser Powder Bed Fusion <i>Enrico Saggionetto, Gerard Roger Vila, Olivier Dedry, Jérôme Tchuindjang and Anne Mertens</i>	Measurement of shear deformation behavior in thickness direction for a mild steel sheet <i>Tomoyuki Hakoyama, Chiharu Hakoyama and Daichi Furusato</i>	Necking detection in stretch-bended materials exhibiting the Portevin-Le Chatelier effect <i>Andrés J. Martínez-Donaire, David Palomo, Eneko Sáenz de Argandoña, Carpóforo Vallellano and Joseba Mendiguren</i>	Axial drilling investigations and the potential of orbital techniques for enhanced hole quality in orthopedics <i>Raafat Hussein, Anna Carla Araujo, Yann Landon and Cristiane Evelise Ribeiro da Silva</i>	Improving precision in the cavity thickness measurement for fabric compaction <i>Pedro Sousa, Xiao Liu, Stepan V. Lomov and Jan Ivens</i>	Eigenstrain method in simulations of laser peen forming of curved surfaces <i>Dominik Poeltl, Siva Teja Sala, Nikolai Kashaev and Benjamin Klusemann</i>	In-situ CT of the clinching process – Influence of settling effects due to process interruptions <i>Daniel Köhler, Robert Kupfer, Juliane Troschitz and Maik Gude</i>

15:20 - 15:40	Investigation on the effect of addition of WC to nitinol powder for additively manufactured biomedical devices <i>Neha Agarwal, Gopinath Perumal, Muhannad Ahmed Obeidi and Dermot Brabazon</i>	Enhanced formability in the multi-step hole-expansion test of AA7075 in W-temper <i>Jinjin Ha, Yumi Choi, Myoung-Gyu Lee and Yannis P. Korkolis</i>	Heat assisted single point incremental forming of Mg-Zn-Zr alloy <i>Ecem Ozden, Hans Vanhove, Annabel Braem and Joost Duftou</i>	Numerical modelling of the micro-cutting in the abrasion process with pyramidal indenter <i>Achref Werchfeni, Abdelhadi Moufki, André Lefebvre and Olivier Sinot</i>	Forming of thermoplastic polymer and magnesium alloy-based Fiber Metal Laminates at elevated temperatures <i>Zheng Liu, Enrico Simonetto, Andrea Ghiotti and Stefania Bruschi</i>	Mesh sensitivity study in the Random Cellular Automata Finite Element model of dynamic recrystallization <i>Mateusz Sitko, Kacper Pawlikowski, Konrad Perzynski and Lukasz Madej</i>	Flexible self-pierce riveting and clinching with a single joining system using the same unified joining tools <i>Benedikt Uhe, Franziska Schützel, Welf-Guntram Drossel and Gerson Meschut</i>
15:40 - 16:00	Experimental and numerical correlations of the compressive behaviour of 316L body-centred cubic lattice structures <i>Ignacio Rios, Alex Martinez, Enrico Saggionetto, Anne Mertens, Laurent Duchene, Anne Marie Habraken and Victor Tuninetti</i>	Crystal plasticity-based forming limit analysis for two types of 5052 aluminum alloy sheets with different heat treatment conditions <i>Sho Sato, Maya Tsukamoto, Yasuhiro Maeda, Yasushi Maeda and Takayuki Hama</i>	Experimental testing and numerical modelling of ductile fracture of PEEK in incremental sheet forming process <i>Shakir Gatea and Hengan Ou</i>	Machinability of PLA obtained by additive manufacturing <i>Liam Cloëz, Michaël Fontaine, Alexandre Gilbin and Thierry Barrière</i>	Influence of viscosity, binder activation, and loading rate on the shear-extension response of an infiltrated UD-NCF <i>Renan Miranda Portela, Bastian Schäfer, Luise Kärger, Alfredo Rocha de Faria and John Montesano</i>	Effectiveness of machining equipment user guides: A comparative study of augmented reality and traditional media <i>Mina Ghobrial, Philippe Seitier, Pierre Lagarrigue, Michel Galaup and Patrick Gilles</i>	Develop surface pre-treatment strategies for refill friction stir spot welding of 6061-T4 Al alloy to AISi-coated steel <i>Tong Shen, Banglong Fu, Ting Chen, Uceu Suhuddin and Benjamin Klusemann</i>
16:00 - 16:20	Corrective capabilities of different rescanning strategies to restore microstructure of initially porous 316L Laser Powder Bed Fusion <i>Théo Le Saint, Clément Keller, Foued Abroug and Lionel Arnaud</i>	Influence of an optical strain rate controlled tensile testing method on mechanical properties of sheet metals <i>David Naimann and Marion Merklein</i>	Spindle speed effect on the quality of ISF parts of materials with different thermal conductivities <i>Zhenyuan Qin, Shakir Gatea and Hengan Ou</i>	An innovative method to model run-out phenomena in micro-milling by using cutting force signal <i>Greta Seneci, Pierpaolo Vincenzo Pancera, Cristian Cappellini, Andrea Abeni and Aldo Attanasio</i>	Polymer-metal interactions and their effect on tool-ply friction of C/PEKK in melt <i>Wouter Grouve, Rens Pierik, Hafidz Pamungaks, Sebastiaan Wijskamp and Remko Akkerman</i>	Enhancing metal-forming predictions with VR-infused digital twin models <i>David Uribe, Cyrille Baudouin, Yoan Locard, Camille Durand and Régis Bigot</i>	Development of new strategies for the mechanical joining of components made of aluminum die casting <i>Christian Kraus, Max Böhnke, Welf-Guntram Drossel and Gerson Meschut</i>

16:20 - 16:50	Coffee break (Foyer Ariane)						
Room	Saint Exupéry Auditorium	Ariane 1	Spot	Ariane 2	Argos	Guillaumet 1	Guillaumet 2
MS	Industrial session	MS05	MS07	MS10	MS02	MS04	MS08
Chairs	France Chabert and Anna-Carla Araujo	Gabriela Vincze	Ihab Ragai	Pedro J. Arrazola	Dmitry Ivanov	Bernd-Arno Behrens	Gianluca Buffa
16:50 - 17:10	MISUTECH 3D Numerical modelling of residual stresses induced in finish turning of a fillet radius Joël Rech	The plane strain compression test, an alternative to large strain hardening characterization <i>Adriana Neag and Tudor Balan</i>	Correlation between Sheet Formability and Joint Strength of A1050-O/SPCC Butt Laser Welded Tailored Blanks Jianchen Jin, <i>Hiromu Sakamoto and Takashi Iizuka</i>	Estimation of the residual stress field of laminated aeronautical parts to prevent distortion after machining Khayel Chaabani, <i>Mathieu Ritou, Mariem Ben Saada, Bruno Lavisse and Guénaél Germain</i>	An investigation into the relationship between tool geometry and thickness changes during the thermoforming of a thermoplastic Composite Kari White and James Sherwood	Advanced functionalisation and numerical simulation of the boundary layer by deformation-induced Martensite on bearing rings through bulk metal forming Simon Peddinghaus, <i>Michael Till, Hendrik Wester, Julius Peddinghaus, Kai Brunotte and Bernd-Arno Behrens</i>	Heterogeneity of strain and texture inside roll-bonded multilaminates Gillaume Hanon, <i>Loïc Malet and Laurent Delannay</i>

17:10 - 17:30	ALTEN LABS Smart Design – New approaches for the design of complex products, composite materials use case with Double Double Leonard Serrano , Theo Delbard, Geoffrey Gisclon, Pablo Navarro, François Rouchon	Evaluation of correlations between principal axes in uni-axial tensile tests of aluminum from the Mohr's strain circle Takashi Iizuka	In-process tool pose measurement in incremental sheet forming Marina Terlau , Axel von Freyberg and Andreas Fischer	Experimental analysis of Burr formation for T6Al4V drilling Benoit Debard , Pierre-André Rey, Mehdi Cherif, Thierry Chiron, Alain Sommier and Theo Chavette	Effects of UD and twill reinforcements in hybrid sheet molding compound laminates Luca Raimondi , Tommaso Maria Brugo, Andrea Zucchelli and Lorenzo Donati	Influence of enlarged joining zone interfaces on the bond properties of tailored formed hybrid components made of 20MnCr5 steel and EN AW-6082 aluminium Armin Piwek , Julius Peddinghaus, Johanna Uhe and Kai Brunotte	On the impact welding of dissimilar alloys for use in multimaterial skeletal fixation devices Michela Sanguedolce , Mohammed Abdelmaola, Francesco Borda, Dae Hyun Cho, Thomas Avey, Luis H. Olivas-Alanis, Agnieszka Chmielewska, Anupam Vivek, Glenn Daehn, Alan A. Luo, Boyd Pantan, Luigino Filice and David Dean
17:30 - 17:50	COMPANY3 Title Speaker	The Experimental Full-Field Method (EFFM) for parameter calibration applied on an anisotropic constitutive model Christian Ilg , Mayank Shetty, Celalettin Karadogan, André Haufe and Mathias Liewald	Numerical and experimental analysis of struts joined by electromagnetic forming for aircraft applications Marcel Henkel , Verena Psyk, Maik Linnemann and Verena Kräusel	Green machining of Ti6Al4V/Polymers composite made by Pellets Additive Manufacturing Julien Bossu , Edouard Rivière-Lorphèvre, Laurent Spitaels, François Ducobu, Fabienne Delaunois, Grégory Martic, Cathy Delmotte, Enrique Juste and Fabrice Petit	Recent Advances in Development, Characterization and Joining of New Sustainable Materials Mariana Banea , Henrique Fernandes De Queiroz, Jorge S. S Neto and Daniel K. K. Cavalcanti	Numerical Process Design for the Production of a Hybrid Die Made of Tool Steel X38CrMoV5.3 and Inconel 718 Janina Sirring , Christoph Heine, Michael Till, Hendrik Wester, Johanna Uhe, Kai Brunotte and Bernd-Arno Behrens	Author workshop Nathalie Jacobs Springer

17:50 - 18:10	COMPANY4 Title <i>Speaker</i>	Plasticity experiments on heavy gauge S700 steel Sam Coppineters , <i>Alessandro Lambrugh, Niels Vancraeynest, Yi Zhang, Steven Cooreman and Bojan Starman</i>	Stretch forming of isotropic materials : Influence of the ratio between yielding in pure shear and uniaxial tension on the stress state Benoit Revil-Baudard , <i>Hernan Goday and Oana Cazacu</i>	Enhancing interfacial bonding strength in fiber metal laminates through metal surface treatments Zheng Liu , <i>Enrico Simonetto, Domenico Umbrello and Giovanna Rotella</i>	Investigation of the friction behavior of uni- and bidirectional non-crimp fabrics Bastian Schäfer , <i>Naim Naouar and Luise Kärger</i>	Potential of near-surface temperature regulation in hybrid additive manufactured forging dies Julius Peddinghaus , <i>Martin Siegmund, Bernd-Arno Behrens, Jochen Giedenbacher, Aziz Huskic, Janina Siring, Hendrik Wester and Kai Brunotte</i>	Author workshop Nathalie Jacobs Springer
From 19:00	Welcome Reception at Pierre Baudis convention center hall + Night city tour for PhD students						

Time	Thursday 25.04.24							
8:00	KN3 (Saint Exupéry Auditorium) Advancing sustainability in PET bottle forming through simulation Prof. Gary Menary							
Room	Saint Exupéry Auditorium	Ariane 1	Spot	Ariane 2	Argos	Guillaumet 1	Guillaumet 2	Diamant
MS	MS01	MS05	MS15	MS10	MS02	MS04	MS06	BENCHMARK
Chairs	Antonello Astarita	Sandrine Thuillier	Giuseppe Ingarao	Gorka Ortiz-de-Zarate and Guenaël Germain	Stepan Lomov	Bernd-Arno Behrens	Lander Galdos	Marthe Vanhulst
8:40-9:00	Modeling fused deposition of PLA by analysis of the layers <i>Carlo Bruni</i>	A novel method to characterize low-temperature brittle failure of mild steels at various deep drawing pre-strains <i>Jan Bechler, Roald Lingbeek, Joshua Grodotzki and A. Erman Tekkaya</i>	Sustainability and economic assessment of an innovative automated filament winding process <i>Iacopo Bianchi, Nello De Prisco, Tommaso Verdini, Tommaso Mancina, Alfonso Martone, Barbara Palmieri and Michela Simoncini</i>	Impact of machining strategy on OFE copper for SRF applications <i>Michal Kolenic, Faudel Belkhir, Ana Teresa Perez Fontenla, Guillaume Jonathan Rosaz, Alice Moros, Marco Garlaschè, Stewart Leith, Carlota Pereira Carlos, Pierre Naisson and Joël Rech</i>	Experimental permeability measurement of different reinforcement types for virtual permeability determination validation <i>Mouadh Boubaker, Willsen Wijaya, Arthur Cantarel, Gérald Debenest and Simon Bickerton</i>	Effects of Co ratio on fatigue life of WC-Co die inserts used in cold forming operations <i>Burak Hizli, Kubra Ozturk and Umut Ince</i>	Study on the influence of process parameters on the damage appearance during the stretch reduction mandrel mill process of super Cr13 tubes <i>Eduardo Garcia Gil, Hamed Aghajani Derazkola, Alberto Murillo-Marrodan and Jon Barco Atutxa</i>	Private session

9:00-9:20	<p>Experimental evaluation of the maximal force before debonding a part from the build platform of an AM printer</p> <p>Laurent Spitaels, <i>Naiara Aldeiturriaga Olabarri, Julien Bossu, Gregory Martic, Enrique Juste, Edouard Rivière-Lorphèvre, Pedro-José Arrazola and François Ducobu</i></p>	<p>Formability analyses of AA6016-T4 aluminum alloy sheets subjected to roping</p> <p><i>Sigbjørn Tveit and Aase Reyes</i></p>	<p>A combined finite element – Life Cycle Assessment approach for assessing the sustainability of the thermoforming process of a thermoplastic composite component</p> <p><i>Antonios Stamopoulos, Angela Daniela La Rosa and Gianluigi Creonti</i></p>	<p>Using the particle Finite Element Method for predicting optimum shear cutting clearance</p> <p>Olle Sandin, <i>Patrick Larour, Juan Manuel Rodríguez, Jörgen Kajberg and Daniel Casellas</i></p>	<p>Automatic planning strategy for robotic lay-up of prepregs on a complex-shaped mold</p> <p><i>Antonio Gambardella, Vitan-tonio Esperto and Pierpaolo Carlone</i></p>	<p>Influences of die shape and calibration strokes on surface near residual stresses of rotary swaged steel tubes</p> <p>Lasse Langstädtler, <i>Dhia Charni, Christian Schenck, Jeremy Epp and Bernd Kuhfuss</i></p>	<p>Analysis of oxidized hot working tool steel tribological behavior in tube piercing</p> <p>Alberto Murillo-Marrodan, <i>Damien Meresse, Eduardo García, Philippe Moreau, Jose Gregorio La Barbera-Sosa and Laurent Dubar</i></p>	Private session
9:20-9:40	<p>Preliminary study on the impact of thermal processing on the performances of parts obtained by Fused Deposition Modeling (FDM)</p> <p>Margaux Lorenzoni, <i>Jérémy Odent, Edouard Rivière-Lorphèvre, Laurent Spitaels, Mohamed Khalil Homrani and François Ducobu</i></p>	<p>A parameter-free strain estimation method to prevent occurrence of splits in sheet forming of complex CAD designs</p> <p>Philip Eyckens, <i>Rob Salaets and Gert Nelissen</i></p>	<p>Finite Element Analysis and Life Cycle Assessment for CFRP laminates in marine applications</p> <p>Chiara Mignanelli, <i>Serena Gentili, Luciano Greco, Archimede Forcelllese, Silvio Pappadà, Alessio Vita, Giuseppe Zanzarelli and Andrea Salomi</i></p>	<p>Applying images processing methods for automation measurement of tool-chip contact length in orthogonal cutting</p> <p><i>Camille Favier, Julien Le Roux, Madalina Calamaz, Jérémie Girardot and Preshit Limje</i></p>	<p>On the methodological measurements of viscosity of unidirectional flax/PP composites: Towards a benchmark</p> <p>Sepehr Simaafrookte, <i>Henri Perrin, Jan Ivens, Stepan V. Lomov and Masoud Bodaghi</i></p>	<p>Using computer vision to analyse fracture strains of oxide scale layers on a macro level</p> <p>Hendrik Wester, <i>Jan Niklas Hunze-Tretow, Johanna Uhe and Bernd-Arno Behrens</i></p>	<p>Massive nitrogen super-saturation into CoCrMo alloys for improvement of tribological performance</p> <p>Tatsuhiko Aizawa, <i>Tatsuya Funazuka, Tomomi Shiratori and Yohei Suzuk</i></p>	

9:40-10:00	Comparative accuracy analysis of continuous fiber composite printers: Coextrusion vs. Dual-Nozzle Technology Imi Ochana, François Ducobu, Laurent Spitaels, Mohamed Khalil Homrani and Anthonin Demarbaix	Modelling ductile damage of a textured aluminum alloy based on a non-quadratic yield function João P. Brito, Marta C. Oliveira, and José L. Alves	Assessing single and multi-step Friction Stir consolidated recycled billets through uniaxial upsetting test Abdul Latif, Giuseppe Ingarao, Livan Fratini, Peter Hetz and Marion Merklein	Tool condition monitoring in machining for the workpiece surface quality evaluation Antonio Del Prete, Lars Nyborg and Rodolfo Franchi and Teresa Primo	Mechanical and chemical combined recycling process for CFRP scraps Luca Boccarusso, Dario De Fazio, Massimo Durante, Antonio Formisano and Antonio Langella	Surrogate model to describe temperature field in real-time for hot forging Aya Midaoui, Cyrille Baudouin, Florence Danglade and Régis Bigot	A novel method to investigate tribological behaviors under transient temperatures using Pin-on-Cylinder tribometer and IR-thermography in glass forming Anh Tuan Vu, Tim Grunwald and Thomas Bergs	Private session
10:00-10:20	Thermomechanical analysis of layer adhesion in large format additive manufacturing applications using glass fiber reinforced ABS Pablo Castelló Pedrero, César García Gascón, Javier Bas-Bolufer, Carles Alabort-Martínez and Juan Antonio García Manrique	Residual formability analysis of bent and remanufactured thin steel sheets Daniele Farioli, Ertuğrul Kaya and Matteo Strano	Property grading by friction induced and continuous solid-state recycling of aluminum scrap Thomas Borgert, Ansgar Nordieker and Werner Homberg	Study of cutting force in milling of Aluminum-Lithium alloy Shoichi Tamura, Daisuke Morii and Takashi Matsumura	Simulation and monitoring of the infusion of thick composites with thermoplastic acrylic resin Nihad Siddig, Philippe Le Bot, Olivier Fouché and Yvan Denis	Prevention of scaling by means of recycled process waste gases Niklas Gerke, Julius Peddinghaus, Daniel Rosenbusch, Johanna Uhe, Kai Brunotte and Bernd-Arno Behrens		

10:20-10:40	Comparison between ALE and Lagrangian Finite Element Formulations to simulate tensile loading for FDM parts Khalil Homrani , Anthonin Demarbaix, Edouard Riviere Lorphèvre, Thomas Beuscart, Imi Ochana and François Ducobu	Measurement and analysis of the strength differential effect of 6000-series aluminum alloy sheet Kaisei Akiyama and Toshihiko Kuwabara	Friction Stir-Assisted Cladding: solid-state recycling of machine shop scrap for sustainable metal production Pankaj Kaushik and Prashant P. Date	Surface characteristics comparison between additively manufactured Ti6Al4V and wrought Ti6Al4V turned samples Maria Rosaria Saffioti , Giovanna Rotella and Antonio Del Prete	Transverse squeeze flow of fibre reinforced thermoplastic composites Gerben Bieleman , Gijs Rotink, Wouter Grouwe, Edwin Klompen and Remko Akkerman	Longitudinal buckling behavior in temper rolling of thin steel strips with delivery angle Toshiro Okazaki , Yukio Kimura, Tatsuro Katsumura and Satoshi Ueoka		Private session
10:40-11:10	Coffee break (Foyer Ariane)							
Room	Saint Exupéry Auditorium	Ariane 1	Spot	Ariane 2	Argos	Guillaumet 1	Guillaumet 2	
MS	MS01	MS05	MS15	MS10	MS02	MS04	MS06	
Chairs	Carlo Bruni	Takayuki Hama	Giuseppe Ingarao	Giovanna Rotella	James Sherwood	Bernd-Arno Behrens	Javad Hazrati	
11:10-11:30	Effect of infill percentage and pattern on compressive behavior of FDM-printed GF-CF PA6 composites Marina Andreozzi , Iacopo Bianchi, Archimede Forcellese, Tommaso Mancina, Chiara Mignanelli and Michela Simoncini	Numerical assessment of the role of anisotropy on strain localization in uniaxial tension Luca Corallo , Oana Cazacu and Patricia Verleysen	LCA analysis of innovative solid-state recycling for aluminum alloy chips via direct hot rollings Mauro Carta , Noomane Ben Khalifa, Pasquale Buonadonna, Alessadro Mele and Mohamad El Mehtedi	Fatigue strength of Ti6Al4V titanium alloy machined under cryogenic conditions Andrea Stramare , Rachele Bertolini, Stefania Bruschi, Andrea Ghiotti and Alberto Campagnolo	Investigating TP-AFP process parameters through a mechanical testing approach Vincenzo Iannone , Felice De Nicola, Mario Costantini, Giovangiuseppe Giusto and Pierpaolo Carlone	Necking of Invar layer in copper-Invar laminates during roll-bonding Ismail Mkinsi , Clotilde Berdin, Anne-Laure Helbert, Thierry Baudin, Denis Solas, Yanick Ateba Betanda and Thierry Waeckerle	Analysis of wear behavior of powder metallurgy tools in shear cutting of electrical steels Aydin Şelte , Praveen Sundarajan, Niklas Hoenen, Erman Tekkaya and Till Clausmeyer	

11:30-11:50	Experimental and numerical study of heat transfer on an industrial FFF printer: application to PEEK <i>Adel Benarbia, Vincent Sobotka, Nicolas Boyard and Christophe Roua</i>	Effect of different oxide layer shares on the upsetting of titanium aluminide specimens <i>Sebastian Döring, Julius Peddinghaus, Kai Brunotte and Bernd-Arno Behrens</i>	Friction Stir Welding of aluminum alloys from an energy-saving perspective <i>Ersilia Cozzolino, Alessia Teresa Silvestri, Giorgio de Alteriis, Antonello Astarita, Rosario Schiano Lo Moriello and Antonino Squillace</i>	Analysis of the influence of the initial surface integrity on the result of burnished high torque splined shafts <i>Philipp Damm, Mohsen Adinehvand, Martin Beutner, Gunnar Meichsner, Georg Hahn, Dirk Zimmermann, Matthias Steffens and Matthias Hackert-Oschätzchen</i>	Modelling large yarn slippage in woven fabrics <i>Jessy Simon, Nahiene Hamila, Sébastien Comas-Cardona and Christophe Binétruy</i>	Rolling process variation estimation using a Monte-Carlo method <i>Max Weiner, Christoph Renzing, Matthias Schmidtchen and Ulrich Prahl</i>	Effect of process parameters on friction in aluminum sheet forming <i>Farshid Jalali Moghadas, Matthijn de Rooij, Ton van den Boogaard and Javad Hazrati</i>
11:50-12:10	Experimental and computational analysis of 3D printed 2D lattices <i>Paola Ginestra</i>	Development of the cross-section moment in air-bending <i>Aki-Petteri Pokka, Vili Kesti, Lars Troive and Antti Kaijalainen</i>	Remanufacturing process chain for end-of-life aluminium car body parts: Technical and economic analysis <i>Daniele Farioli, Luca Murgese, Camilla Pinardi, Ertuğrul Kaya and Matteo Strano</i>	Microstructure refinement by a novel friction-based processing on Mg-Zn-Ca alloy <i>Ting Chen, Banglong Fu, Junjun Shen, Uceu Suhuddin, Björn Wiese, Jorge dos Santos, Jean Pierre Bergmann and Benjamin Kluseman</i>	Modeling time-dependent anisotropy in MEX component scale process simulation <i>Mario Emanuele Di Nardo, Felix Frölich, Luise Kärger and Pierpaolo Carlone</i>	Impact of Hot Rolling on the R-Values of 6000 Series Aluminium Alloys <i>Ali Sarban</i>	Investigation into the friction and wear behaviour of polymer coated steel <i>Jenny Venema and Henri Kwakkel</i>

12:10-12:30	Influence of thermal treatment on surface roughness, microstructural, and mechanical properties of 3D printed ABS Khanh Q. Nguyen, Pascal Y. Vuillaume, Lei Hu, Andro Vachon, Audrey Diouf-Lewis, Pier-Luc Marcoux, Lambert Gagné, Mathieu Robert and Saïd Elkoun	Impact of self-heating during hot deformation in the post-dynamic recrystallization and grain growth of an Fe-based superalloy Antonio Potenciano Carpintero, Marc Bernacki, Alexis Nicolay, Cyrille Collin, Jonathan Dairon, Olena Danylova and Nathalie Bozzolo	Investigation of the reshaping process by hydroforming using magnetorheological fluids Antonio Piccininni, Angela Cusanno, Giuseppe Ingarao, Gianfranco Palumbo and Livan Fratini	Influence of the depth of cut on the AM Nitinol properties in flood and cryogenic machining Alessandra Guarise, Rachele Bertolini, Andrea Ghiotti and Stefania Bruschi	Multi-scale characterization of laser-welded carbon-fibre reinforced PEEK composites Noé Restif, Suzanne Laik, Mael Peron, Federica Daghia and Frédéric Jacquemin	Design of an experimental simulator of void closure during hot rolling process Akhil Gopakumar, Laurent Langlois, Corentin Pondaven and Régis Bigot	Effect of micro-plasto-hydrodynamic lubrication on strip surface in steel cold rolling Cynthia Elhajj, Imene Lahouij, Linh Phuong Luong and Pierre Montmitonnet
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12:30 - 14:00 Lunch break (Caravelle 1)

14:00 KN4 (Saint Exupéry Auditorium) Friction stir allows much more than welding: enhancing mechanical properties of aluminum alloys, make them healable or as an additive manufacturing process Prof. Aude Simar

Room	Saint Exupéry Auditorium	Ariane 1	Spot	Ariane 2	Argos	Guillaumet 1	Guillaumet 2	Diamant
MS	MS01	MS05	MS15	MS10	MS02	MS09	MS14	BENCHMARK
Chairs	Paolo Cappa	Holger Aretz	Giuseppe Ingarao	Cedric Courbon	Remko Akkerman and Wouter Grouve	A. Gil Andrade Campos	Vincent Sobotka	Marthe Vanhulst

14:40-15:00	Preliminary assessment of Material Extrusion (MEX) for medical applications: the effect of hatch angle Francesca Sala, Lorenzo Nani, Mariangela Quarto and Gianluca D'Urso	Tension-compression asymmetry of ferritic stainless steel sheet Koki Sekiya, Hyuga Higashii, Akira Taoka and Toshihiko Kuwabara	Innovative control system for straightening machines using sensor information from downstream processes Lukas Bathelt, Eugen Djakow, Christian Henke and Ansgar Trächtler	Numerical simulation of milling operations on flexible composite parts Matthias Nutte, Edouard Rivière-Lorphèvre, Valentin Dambly, Pedro José Arrazola, Ismail Lazoglu and Francois Ducobu	Draping of biaxial non-crimp fabric on hemispherical shape Naim Naoua, Ruochen Zheng, Bastian Schäfer, Auriane Platzer, Julien Colmars, Luise Kärger and Philippe Boisse	Identifiability analysis of material identification using nonlinear VFM Bojan Starman, Yi Zhang, Pascal Lava, Miroslav Halilović and Sam Coppieters	Optimization of the temperature profile of PET preform via a 3D modelling of the Infrared heating and ventilation Yun-Mei Luo, Luc Chevalier and Thanh Tung Nguyen	Public session
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15:00-15:20	Metallization of vitrimers by cold spray: A preliminary study Antonio Viscusi , Alessia Serena Perna, Alfonso Martone, Barbara Palmieri, Fabrizia Cilento, Eugenio Amendola, Fausto Tucci, Domenico Borrelli, Antonio Caraviello and Nicola Sicignano	Warm forming of AA7075-T6: optimizing the heating time to maintain T6 condition Hervé Laurent , Sylvain Royne and André Maillard	An acoustic emission based data-driven method for predicting the remaining life of stamping molds Tianjiao Bi , Lei Li and Haihong Huang	Micro-milling and micro-EDM residual stresses evaluation on post-processed 3D printed samples Paola Ginestra , Abe Hikaru, Iman Farhana Binti Juanih, Mariangela Quarto, Andrea Abeni, Aldo Attanasio, Gianluca D'Urso and Takashi Matsuura	Experimental characterisation for compression moulding of hybrid architecture composites using reclaimed prepreg manufacturing waste Connie Qian , Hao Yuan, Hasina Begum, Tom Hill, Richard Groves, Adam Joesbury and Lee Harper	Inverse identification of the heterogeneous strain hardening of the friction stir welded aluminum sheets using virtual fields method Chanyang Kim , Jinwoo Lee, Daeyong Kim and Myoung-Gyu Lee	Influence of the use of mechanically recycled PET in Injection Stretch Blow Moulding process (ISBM) Christelle Combeaud , Laurianne Viora and Jean-Luc Bouvard
15:20-15:40	Prediction of the microstructure morphology after the WAAM process based on the FEM simulation results Aliakbar Em-dadi , Joanna Szyndler, Markus Apel and Sebastian Härtel	Investigation on diametral compression of an aluminium alloy AA5005 using EBSD and micro-hardness measurements Henri Francillette and Christian Garand	Liquid nitrogen impingement cooling of ultra-high strength steel in hot stamping process Dongsheng Cao , Lei Li and Haihong Huang	Estimation of the cutting tool wear during machining with artificial intelligence approaches Lorenzo Colantonio , Lucas Equeter, Pierre Dehombreux and François Ducobu	Tool Path Strategies for Single Point Incremental Forming of Fiber-Reinforced Thermoplastic Sheets Jan-Erik Rath and Thorsten Schüppstuhl	Topology optimization for design of additively manufactured hot stamping tool Daoming Yu , Mohamed Rachik, Gilles Brun, Alexandre Blaise and Benjamin Sarre	Utilizing thermal imaging for non-destructive thermoformability assessment in vacuum-air pressure thermoforming of plastic-coated paperboards Sanaz Afshariantorghabeh , Timo Kärki and Ville Leminen

15:40-16:00	Inverse identification of heat source model parameters for Laser-Powder Directed Energy Deposition of AISI H13 deposit on AISI H11 substrate Johanna Bertrand , Fazilay Abbes, Hervé Bonnefoy, Bruno Flan and Boussad Abbes	Characterization of the superplastic behavior of a Ti6Al4V-ELI alloy bilayer sheet Pasquale Guglielmi , Antonio Piccininni, Angela Cusanno, Lorenzo Vaiani, Antonio Emanuele Uva and Gianfranco Palumbo	Influence of surface treatments on the fatigue strength of cross bores in shafts from EN-GJS700-2 Lars Uhlmann, Martina Müller, Tim Herrig and Thomas Bergs and Mohammad Dadgar	Effect of the laser powder bed fusion printing parameters on the AISi7Mg aluminum alloy surface integrity after machining Edoardo Ghinatti , Rachele Bertolini, Andrea Ghiotti and Stefania Bruschi	Novel approach for reducing thinning during forming of foil metal Max Meerkamp, Lars Uhlmann, Martina Müller , Tim Herrig and Thomas Bergs	Intelligent control of ISBM process for recycled PET bottles William Han , Pierre Kerfriden, Laurianne Viora, Christelle Combeaud, Jean-Luc Bouvard and Sabine Cantournet	Monitoring the temperature during thermoplastic composites assembling with fibre Bragg gratings: validation using a rheometer Adrian Korycki , Fabrice Carassus, Christian Garnier, France Chabert, Toufik Djilali and Pascal Casari
16:00-16:20	Prediction of the evolution of material properties during the AM process based on the FEM simulation and experimental results Sebastian Härtel , Joanna Szyndler, Moein Pakdel Sefidi and Reyk Jäger	Influence of the rolling direction on damage evolution during deep drawing Martina Müller, Tim Herrig , Thomas Bergs, Max Wollenweber and Setareh Medghalchi	Monitoring of the Friction Stir Welding process: A preliminary study Alessia Teresa Silvestri , Ersilia Cozzolino, Giorgio de Alteriis, Antonello Astarita, Rosario Schiano Lo Moriello and Antonino Squillace	Artificial Intelligence techniques and Internet of Things sensors for tool condition monitoring in milling: A review Stefania Ferrisi, Giuseppina Ambrogio , Rosita Guido and Domenico Umbrello	Investigations on the production and forming of thermoplastic ceramic green tapes Ricardo Trân , Anne Mannschatz, Verena Psyk, Anne Günther and Martin Dix	Constitutive model validity evaluation for MT 2.0 applications Amar Peshave , Fabrice Pierron, Pascal Lava and Sam Coppieters	Evaluation of thermal properties of PEEK samples made by MEX Roberto Spina , and Nicola Gurado
16:20 - 16:50	Coffee break (Foyer Ariane)						
Room	Saint Exupéry Auditorium	Ariane 1	Spot	Ariane 2	Argos	Guillaumet 1	Guillaumet 2
MS	MS01	MS05		MS07	MS13	MS09	MS14
Chairs	Paola Ginestra	Holger Aretz		Ihab Ragai	Denise Bellisario and Laurentiu Slatineanu	Matteo Strano	Vincent Sobotka

16:50-17:10	Machine learning application for optimization of Laser Directed Energy Deposition Process in additive manufacturing Gökhan Ertugrul, Artem Alimov, Alexander Sviridov and Sebastian Härtel	Molecular dynamics simulation for determining dislocation strengthening coefficient in BCC iron Naoki Miyazawa and Takayuki Hama		Sensor integration for process control in deep drawing Robert Jung, Christoph Seper, Christian Juricek and Friedrich Bleicher	Reprocessable vitrimeric composites metallized via Cold Spray: a preliminary study on the feasibility of novel hybrid structures Alessia Serena Perna, Antonio Viscusi, Alfonso Martone, Barbara Palmieri, Fabrizia Cilento, Michele Giordano, Fausto Tucci, Domenico Borrelli, Antonio Caraviello and Nicola Sicignano	Influence of data filtering and noise on the calibration of constitutive models using machine learning techniques Pedro Prates, José Pinto, João Marques, João Henriques, André Pereira and António Andrade-Campos	Rheological behavior of nanofillers enclosed multilayer systems under elongational flows: From microlayers to nanolayers Jixiang Li, Abderahim Maazouz and Khalid Lamnawar
17:10-17:30	Processability of Aluminum-Matrix Composite (AMC) by ultrasonic powder atomization Angelika Jedynak, Sebastian Härtel, Robert Pippig and Tomasz Choma	Influence of pre-strain on fracture toughness of 3rd generation advanced high strength steels Laura Grifé, David Frómeta, Anna Payà and Daniel Casella		Predicting fine blanking process signals from sheet metal thickness Jiyoung Moon, Daria Gelbich, Marco Becker, Philipp Niemiets and Thomas Bergs	Recycling of thermoset fiberglass by direct molding of ground powders Denise Bellisario, Leandro Iorio, Alice Proietti, Fabrizio Quadrini and Loredana Santo	Influence of the sheet thickness variability on the deep drawing of a cylindrical cup André Pereira, Pedro Prates, Tomás Parreira and Marta Oliveira	Investigation of temperature-dependent mechanical behaviours of polycarbonate with an innovative fractional order model Lin Sun, Gang Cheng and Thierry Barriere
17:30-19:00	ESAFORM General Assembly (Saint Exupéry Auditorium)						
19:45	Gala diner (Hotel Dieu)						

Time	Friday 26.04.24						
Room	Saint Exupéry Auditorium	Ariane 1	Spot	Ariane 2	Argos	Guillaumet 1	Guillaumet 2
MS	MS01	MS05	MS03	MS11	MS13	MS07	MS14
Chairs	Mariangela Quarto	Akinori Yamanaka	Lorenzo Donati	Semih Perdahcioglu	Matthias Hackert-Oschätzchen, and Loredana Santo	Giusy Ambrogio	Roberto Spina
9:00-9:20	Frequency domain analysis for in-situ monitoring of Wire Arc Additive Manufacturing process Giulio Matera , Joseph Polden, Alessandra Caggiano, Stephen Van Duin, Luigi Nele and Zengxi Pan	Local ductility in steel sheet, towards a practical and robust measurement method Roald Lingbeek , Patrick Larour, Astrid Ruck, Thorsten Beier, Dominique Cornette, Thomas Schadow and Sebastian Westhäuser	Layer adhesion and critical strain of HFCVD diamond coatings on WC-Co substrate Stefan Lechner , Sarah Baron, Markus Höfer, Christian Stein and Sören Müller	Mechanical characterization and behavior modelling of Ti-6Al-4V alloy in hot forming conditions by DIC Lucas D'Archivio , Luc Penazzi, Vincent Velay and Vanessa Vidal	Improving room temperature formability of twin-roll cast Mg-Al-Zn-Sn alloy by repeated bending Hotaka Tozuka , Hisaki Watari and Toshio Haga	Electrically-assisted forming of 5754 aluminium alloy under different strain conditions Daniel Dobras , Zbigniew Zimniak and Mateusz Dziubek	Analysis of thermal behavior in 3D printing of continuous fiber reinforced polymer composites Shixian Li , J.P.M. Correia, Kui Wang and Said Ahzi
9:20-9:40	Thermal multi-sensor instrumentation for the enhancement of a Directed energy deposition process Lilou de Peindray d'Ambelle , Olivier Cherrier, Kamel Moussaoui and Catherine Mabru	The non-proportional loading of mild steel Sumit Hazra , Sisir Dhara, Scott Taylor and Lukasz Figiel	Prediction of longitudinal seam weld quality in multi-chamber aluminium extrusion Eren Can Sariyarlioglu , Torgeir Welø and Jun Ma	Comparison between different methods to determine material constants of the ZK60 Mg alloy from hot bulge tests data Angela Cusanno , Antonio Piccininni, Pasquale Guglielmi, Donato Sorgente, Jun Qiao and Gianfranco Palumbo	Applicability of productivity enhanced sinking-EDM of cemented carbide forming tools for bipolar plates Timm Petersen , Herman Voigts, Tim Herrig and Thomas Bergs	Optimization of the heating parameters of a robotized hot incremental forming of polymer Valentin Duarte Rocha , Laurence Giraud Moreau and Abel Cherouat	Experimental and numerical investigation of the light Scattering of the 3D printed parts Thi-Ha-Xuyen Nguyen , Anh-Duc Le, André Chateau Akué Asséko and Benoît Cosson

9:40-10:00	Multi-sensor in-process monitoring of WAAM: Detection of process instability in electrical signals <i>Sarra Oueslati, Elodie Paquet, Mathieu Ritou, Farouk Belkadi and Philippe Le Bot</i>	A temperature-dependent crystal plasticity model for predicting cyclic loading behaviors of a magnesium <i>Hyuk Jong Bong</i>	Numerical simulation of the extrusion process with different FEM code approaches: Analysis of thermal field, profile speed, defects evolution and microstructure of hollow tubes <i>Riccardo Pelaccia, Marco Negrozio, Sara Di Donato, Barbara Reggiani and Lorenzo Donati</i>	Methodology for the automated spatial mapping of heterogeneous elastoplastic properties of welded joints <i>Robert Hamill, Aleksander Marek, Allan Harte and Fabrice Pierron</i>	Experimental evidence on the twisting of incrementally formed polymer sheets by varying the toolpath strategy <i>Antonio Formisano, Luca Boccarusso, Dario De Fazio, Umberto Prisco, Massimo Durante and Antonio Langella</i>	Study on the effects of tool design and process parameters on the robustness of deep drawing <i>Christine Heinzl, Sebastian Thierry and Noomane Ben Khalifa</i>	Injection molding control parameter assessment by nested Taguchi design of simulation <i>Vasiliki Iliopoulou and George Vosiakos</i>
10:00-10:20	Real-time 3D printing defects detection using thermal imaging <i>Safouene Rhim, Hala Albahloul and Christophe Roua</i>	The effect of friction compensation on the slope of flow curves obtained by stack compression tests <i>Gábor J. Béres, Martin L. Köllös and Richárd Borbély</i>	Optimization of working conditions and increase of productivity of aluminum hot extrusion press based on finite element analysis <i>Juan Llorca-Schenk, Praveen Hewage and Lasindu Gayashan</i>	A robust identification protocol of flow curve adjusting parameters using uniaxial tensile curve <i>Xavier Lemoine, Rémi Munier and Xavier Bellut</i>	Manufacturing of shape memory foams in hypergravity and simulated microgravity <i>Loredana Santo, Leandro Iorio, Alice Proietti, Denise Bellisario, Pietro Ioppolo, Raffaella Pecci and Fabrizio Quadrini</i>	Influence of intermediate shapes on the final accuracy and thickness distributions in multi-step incremental forming <i>Marthe Vanhulst, Hans Vanhove and Joost R. Duflou</i>	Investigation of the effects of gas-counter-pressure injection moulding on the properties and manufacturability of post-consumer recycled polypropylene <i>Anna Bortolotto, Enrico Bovo, Marco Sorgato and Giovanni Lucchetta</i>

10:20-10:40	Realization of functionally graded component with an optimized hybrid additive lamination tooling method Hamed Dardaei, Joghan, Ololade Agboola and A. Erman Tekkaya	Enhancement of fracture strain during abrupt or orthogonal strain-path changes in ferrite/martensite dual phase steel Takashi Matsuno, Nanami Kinoshita, Keisuke Hokimoto, Takayuki Hama and Yoshiaki Honda	Investigation of heat transfer dependencies in quenching of extrusion profiles based on experiment and FEM simulation Ivan Kniazkin, Vladimir Krylov, Andrei Shitikov, Ivan Kulakov and Nikolay Biba	Fatigue life analysis of hot forming dies produced by L-PBF and WA-DED additive technologies Artem Alimov, Alexander Sviridov and Sebastian Härtel	Cellular automata and crystal plasticity modelling for metal additive manufacturing Majid Kavousi, Patrick McGarry, Peter McHugh and Sean Leen	Processing of sheets made of long fibers reinforced plastics by SPIF Giuseppina Ambrogio, Francesco Borda, Romina Conte, Luigino Filice and Francesco Gagliardi	Analysis of the effect of draft angle and surface roughness on ejection forces in micro injection molding Francesco Maciariello, Giovanni Lucchetta and Marco Sorgato
10:40-11:10	Coffee break (Foyer Ariane)						
Room	Saint Exupéry Auditorium	Ariane 1	Spot	Ariane 2	Argos	Guillaumet 1	Guillaumet 2
MS	MS01	MS05	MS03	MS11	MS13	MS07	MS14
Chairs	Didier Delaunay	Tudor Balan	Riccardo Pelaccia	Anne Habraken	Hans-Peter Schulze and Luca Bocarusso	Katia Mocellin	France Chabert
11:10-11:30	Performance assessment of Wire Arc Additive Manufacturing with respect to the repeatability of the process under uncertainties Shyam Pulickan, Pascal Lafon, Laurent Langlois and Sandra Chevret	Predicting edge fracture in quenching and partitioning steels with fully anisotropic fracture model Ziman Li, Fuhui Shen, Yuling Chang, Junying Min and Junhe Lian	Direct recycling of AA6063 chips by hot extrusion applying pseudo port-hole die Tatsuya Funazuka, Syun Yamashita, Takumi Urakawa, Tomomi Shiratori, Norio Takatsuji and Kuniaki Dohda	A new view on the solution of rate-independent crystal plasticity finite element models Björn Nijhuis, Semih Perdahcioglu and Ton van den Boogaard	Experimental derivation of process input parameters for electrochemical precision machining of a powder metallurgical tool steel Richard Petermann, Pascal Clauß, Philipp Damm, Gunnar Meichsner and Matthias Hackert-Oschätzchen	Effect of vibration frequency and amplitude on formability in rotational vibration assisted incremental sheet forming (RV-ISF) Hui Zhu, Wenxuan Peng and Hui Long	Design optimization of filament wound cylinder by considering process induced residuals stresses Barbara Palmieri, Iacopo Bianchi, Nello De Prisco, Archimede Forcellese, Tommaso Mancina, Michela Simoncini, Giuseppe De Tommaso, Angelo Petriccione and Alfonso Martone

11:30-11:50	<p>On the experimentation of the Laser-Powder Bed Fusion process for high-strength aluminium alloys Andrea El Hassanin, Alessia Serena Perna, Nicola Sicignano, Domenico Borrelli, Antonio Caraviello and Antonello Astarita</p>	<p>Parametric failure limit detection for the sheet metal forming of a Floating Photovoltaic (FPV) aluminum alloy structure Sigbjørn Tveit, Aase Reyes and Emrah Erduran</p>	<p>Effect of ball milling processing on mechanical properties of extruded Aluminum-Graphene-Composites with commercial and self-synthesized graphene sources Maik Negendank, and Soeren Mueller</p>	<p>Computational thermo-mechanical process design by integrating crystal plasticity and phase field model Kyung Mun Min, Hyuk Jong Bong and Myoung-Gyu Lee</p>	<p>Simulation-based analysis of electrical current induction in a device for electrochemical precision machining of Nd-Fe-B permanent magnets Alexander Thielecke, Matthias Hackert-Oschätzchen, Gunnar Meichsner, Thomas Berger, Sascha Loebel, André Martin, Robin Schulze and Andreas Schubert</p>	<p>Improving the flow forming process by a novel closed-loop control Lukas Kersting, Sebastian Sander, Bahman Arian, Julian Rozo Vasquez, Ansgar Trächtler, Werner Homberg and Frank Walther</p>	<p>Identification of the thermal conductivity of polymer materials during their crystallization Rita Mousallem, Elissa El Rassy, Jalal Faraj, Nicolas Lefevre and Jean-Luc Bailleul</p>
11:50-12:10	<p>Laser metal deposition of NbTaTiV refractory high entropy alloy Eric Barth and Anis Hor</p>	<p>Heterostructures produced through severe plastic deformation of multilayered systems: steel-Ti and steel-Mg Bartłomiej Pabich, Janusz Majta and Marcin Kwiecień</p>	<p>Modelling ductile fracture in Al alloy with crystal plasticity models Mikhail Khadyko, Bjørn Håkon Frodal and Odd Sture Hopperstad</p>	<p>One-shot drilling of unconventional thin metal hybrid stacks for aerospace applications Martina Panico, Emmanuele D'Agostino, Vincenzo De Rosa, Massimo Durante, Serena Messere, Antonio Langella and Luca Boccarusso</p>	<p>Thermomechanical reverse flow forming of AISI 304L Bahman Arian, Julian Rozo Vasquez, Lukas Kersting, Werner Homberg, Frank Walther and Ansgar Trächtler</p>	<p>Multimaterial topology optimization of additively manufactured thermoplastic molds for heat transfer enhancement Bruno Storti, Vincent Sobotka, Juan Carlos Álvarez Hostos, Nicolás Lefevre, Steven Le Corre and Victor Fachinotti</p>	

12:10-12:30	Finite element modeling (FEM) as a design tool to produce thin wall structures in laser powder bed fusion (LPBF) Gaetano Pollara, Dina Palmeri, Gianluca Buffa and Livan Fratini		Behavior of volumetric core defects in friction extrusion of wire from Al-Cu alloy Lars Rath, Uceu F. H. Suhuddin and Benjamin Klusemann	Fatigue resistance of deep drawn parts: A scale bridging simulative study using representative Volume Elements and Crystal Plasticity Simulations Niklas Fehle-mann, Manuel Henrich, Martina Müller, Markus Könemann, Thomas Bergs and Sebastian Münstermann	Integrating simulation and experimentation for compaction powder forming: A study on RVE size, friction, and particle size distribution Hossein Ghorbani-Menghari, Hwi-Jun Kim, Hyunjoo Choi, Pil-Ryung Cha and Ji Hoon Kim	Modular 3D roller straightening – A new approach to straightening and forming of spring steel wires (X10CrNi18-8) Frederik Dahms and Werner Homberg	Study of surface grinding of PEEK parts Roberto Spina and Nicola Gurrado
12:30 - 14:00	Lunch break (Caravelle 1)						
Room	Saint Exupéry Auditorium	Ariane 1	Spot	Ariane 2	Argos	Guillaumet 1	Guillaumet 2
MS	MS01	MS09	MS03	MS11	MS13	MS07	MS14
Chairs	Catherine Mabru	Miroslav Halilović	Marco Negozio	Lionel Leotoing	Laurentiu Slatineanu and Margareta Coteata	Katia Mocellin	Christian Garnier

14:00-14:20	<p>Microstructure and fatigue behavior of duplex stainless steel obtained with laser powder bed fusion</p> <p>Maxime Piras, Anis Hor and Eric Charkaluk</p>	<p>Experimental investigation of heterogeneous mechanical tests for sheet metals</p> <p>Mafalda Gonçalves, Briag Guegan, Sandrine Thuillier and António Andrade-Campos</p>	<p>Characterization and modelling of grain growth in Zr-Nb alloys: niobium concentration influence</p> <p>Pauline Hahn, Alexis Gaillac, Baptiste Flipon, Madeleine Bignon, Nathalie Bozzolo and Marc Bernacki</p>	<p>High strain rate investigation on the mechanical anisotropy induced by SLM technology on a 3D printed steel</p> <p>Edoardo Mancini, Mattia Utzeri, Gabriele Cortis, Daniele Cortis, Donato Orlandi, Luca Di Angelo, Luca Cortese and Marco Sasso</p>	<p>Influences of line and contact impedance of the efficiency by non-conventional processes</p> <p>Mathias Herzig, Hans-Peter Schulze and Oliver Kröning</p>	<p>Study on the numerical prediction quality of material models regarding springback of hollow embossed metallic bipolar half-plates</p> <p>Maxim Beck, Celalettin Karadogan, Patrick Cyron, Kim Rouven Riedmüller and Mathias Liewald</p>	<p>Development of novel composites of incompatible barrier polymers and their optimal processing conditions for recyclable thermoformable food packaging sheet</p> <p>Alain Akiki, Jean-Luc Bailleul, Elissa El Rassy, Georges Challita and Rouaida Abou Naccoul</p>	<p>Airbus Visit 14:30 to 16:00</p>
14:20-14:40	<p>Artificial intelligence approaches for enhanced coating performance</p> <p>Alessia Serena Perna, Luigi Carrino, Alessia Auriemma Citarella, Fabiola De Marco, Luigi Di Biasi, Genoveffa Tortora and Antonio Viscusi</p>	<p>Determining the residual formability of shear-cut sheet metal edges by utilizing an ML based prediction model</p> <p>Marcel Görz, Adrian Schenek, Trong Quan Vo, Kim Rouven Riedmüller and Mathias Liewald</p>	<p>Analysis of deformation behavior and microstructure evolution of 2219-O aluminum alloy and AZ31-B magnesium alloy under low-frequency vibration assisted compression</p> <p>Ye Tian, Wen Zhang, Weicai Shen, Xincun Zhuang and Zhen Zhao</p>	<p>Investigations of strain rate sensitivity under different stress triaxialities for DC04</p> <p>Lorenz Maier, Edgar Marker, Fabian Schulz and Wolfram Volk</p>	<p>Virtual inline compensation by single point-tracking in free-form bending</p> <p>Lorenzo Scandola, Viktor Böhm, Daniel Maier and Wolfram Volk</p>	<p>Characterization of the wrinkling limit curve using in-plane compression tests</p> <p>João Magrinho, João Santos and Beatriz Silva</p>	<p>Characterization of recycled polyethylene terephthalate (rPET) – impact of proportion of virgin and recycled PET on mechanical strength</p> <p>Thanh Tung Nguyen, Yun Mei Luo and Luc Chevalier</p>	

14:40-15:00	Improvement of the surface quality of titanium-based design objects produced through WAAM technology using chemical machining: a preliminary study <i>Alessia Serena Perna, Fabio Scherillo, Antonino Squillace, Gianni Campatelli and Gustavo Carvalho</i>	Surrogate modelling for multi-objective optimization in high precision optics production <i>Anh Tuan Vu, Hamidreza Paria, Tim Grunwald and Thomas Bergs</i>	Prediction of the microstructure evolution during the Friction Stir Extrusion of a AA6061 aluminum alloy <i>Sara Bocchi, Marco Negozio, Claudio Gardini and Lorenzo Donati</i>	Influence of manufacturing defaults on the behavior of 3d printed lattice structures with a multiscale Data-Driven approach <i>Clément Court</i>	Investigation of the influences on the indentation of tubes under lateral loads by segmented forming tools using DoE <i>Jonas Reuter, Apostolos Aslanidis and Bernd Engel</i>	Strain rates in high velocity forming of foils <i>Lasse Langstädtler, Björn Beckschwarte, Tobias Valentino and Tim Radel</i>	Recycling of thermoplastic materials: Development of a self-adaptive process to the recycled materials <i>Elena Farah, Ghinwa El Hajj Sleiman, Eric Le Gal La Salle and Jean-Luc Bailleul</i>
15:00-15:20	Influence of deposition strategy on porosity in powder-feed Directed Energy Deposition (DED) <i>Neha Devi Dhoonooah, Kamel Moussaoui, Frederic Monies, Walter Rubio and Redouane Zitoune</i>	VForm-xSteels: virtual materials database <i>Antônio Andrade-Campos, Afonso Campos, João Henriques, Lucius Filho, Marcos Túlio, Mariana Conde, Mafalda Gonçalves, Pedro Prates and Rúben Lourenço</i>	Experimental, analytical and numerical analysis of the copper multi-pass drawing process <i>Sara Di Donato, Marco Negozio, Riccardo Pelaccia, Barbara Reggiani and Lorenzo Donati</i>	The prospects of implementation of artificial intelligence for modelling of microstructural parameters in metal forming processes <i>Nikolay Biba, Olga Bylya, Denis Tretyakov, Andrei Shitikov, Artur Gartvig and Sergey Stebunov</i>	Process analysis using adapted Rogowski coil for nonconventional processes <i>Haytham Darawish, Mathias Herzig, Hans-Peter Schulze and Oliver Kröning</i>	Investigation of variation of triaxiality and lode angle parameter values in deep drawing process <i>Tolunay Güzelderen and Haluk Darendeliler</i>	Two-step forging of polyimide powders into small-/medium-sized gears with and without carbon fiber reinforcement <i>Tatsuhiko Aizawa, Tomohiro Miyataa, and Kiyoyuki Endo</i>

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15:20-15:40	A multiscale analysis of 316L stainless steel microstructures for WAAM manufacturing tool prediction Robin Kromer and Corinne Arvieu		Analysis of mechanical properties of stainless steel small diameter cold drawn wires Julien Vaissette , Catherine Mabru and Manuel Paredes	Investigations on the temperature and strain rate dependent behavior of a reinforced thermoplastic: application in hot incremental forming Josephine Faddoul , Pierre Rahme , Dominique Guines and Lionel Leotoring	Effect of process parameters on final geometry and quality in hot tube spinning process Nagihan Erdem , Murat Gunes and Mehmet Yigit	Effect of tool path on wrinkling of the complex profile manufactured by flexible roll bending Ali Beigzadeh , Enrico Simonetto , Andrea Ghiotti and Stefania Bruschi	A Melt Flow Index-based approach for the viscosity curves determination Keltoum Oubellaouch , Riccardo Pelaccia , Paolo Pozzi , Giulia Zaniboni , Leonardo Orazi , Lorenzo Donati and Barbara Reggiani
15:40 - 16:10	Coffee break (Foyer Ariane)						
Room	Saint Exupéry Auditorium	Ariane 1	Spot	Ariane 2	Argos	Guillaumet 1	Guillaumet 2
MS	MS01				MS13		MS14
Chairs	Merve Nur Dogu				Luca Bocarusso and Margareta Coteata		Christian Garnier
16:10-16:30	An efficient steady-state thermal model for predicting the lack-of-fusion porosity during laser powder bed fusion process Yabo Jia , Yassine Saadlaoui and Jean-Michel Bergheau				Nano-texturing orientation effect on the piercing behavior of five stacked amorphous electrical steel sheets Tomomi Shiratori , Kentaro Ito , Suguri Furuhata and Tatsuhiko Aizawa		Effect of different auxetic cell design on the compression behavior of FDMed structures Francesco Napolitano , Ivano Cardenio , Filippo Defina , Emanuele Manco , Ilaria Papa , Alessandro Manzo and Pietro Russo

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16:30-16:50	<p>Differential thermal analysis to assist the design of corrosion-resistant high entropy alloys for Laser Powder Bed Fusion</p> <p>Herrim Seidou, <i>Anne Mertens, Jérôme Tchoufang Tchuindjang, Catherine Blondiau, Olivier Dedry, Angelo Oñate and Victor Tuninetti</i></p>				<p>Perforation resistance of some materials in 3D printed parts</p> <p>Mihaela Nicolau, <i>Adelina Hrițuc, Mihalache Marius Andrei, Gheorghe Nagit, Petru Dusa, Elisaveta Craciun, Adriana Munteanu, Oana Dodun and Laurentiu Slatineanu</i></p>			
16:50-17:10	<p>Threaded connections in titanium sheets through local reinforcement by means of droplet deposition</p> <p>Hans Vanhove, <i>Ecem Ozden, Joost Duflou, Arnout De-jans and Oleksandr Kurtov</i></p>				<p>Manufacturing of a shape memory polymer composite actuator with embedded heater</p> <p>Leandro Iorio, <i>Alice Proietti, Denise Bellisario, Fabrizio Quadrini and Loredana Santo</i></p>			<p>Airbus Visit 16:15 to 18:00</p>
17:10-17:30					<p>The influence of signal type and distance to the sound source on sound transmission through small 3D printed plastic panels</p> <p><i>Adelina Hrițuc, Mihalache Marius Andrei, Oana Dodun, Gheorghe Nagit and Laurentiu Slatineanu</i></p>			