| Time | Friday 26.04.24 | | | | | | |
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| Room | Saint Exupéry Auditorium | Ariane 1 | Spot | Ariane 2 | Argos | Guillaumet 1 | Guillaumet 2 |
| MS<br><br>Chairs | MS01<br><br>Mariangela Quarto | MS13<br><br>Hans-Peter Schulze and Luca Bocarusso | MS03<br><br>Lorenzo Donati | MS11<br><br>Semih Perdahcioglu | MS05<br><br>Akinori Yamanaka | MS07<br><br>Joost Duflou | MS14<br><br>Roberto Spina |
| 9:00-9:20 | Frequency domain analysis for in-situ monitoring of Wire Arc Additive Manufacturing process **Giulio Mattera**, *Joseph Polden, Alessandra Caggiano, Stephen Van Duin, Luigi Nele and Zengxi Pan* | Manufacturing of shape memory foams in hypergravity and simulated microgravity **Loredana Santo**, *Leandro Iorio, Alice Proietti, Denise Bellisario, Pietro Ioppolo, Raffaella Pecci and Fabrizio Quadrini* | 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* | Investigation on diametral compression of an aluminium alloy AA5005 using EBSD and microhardness measurements **Henri Francillette** *and Christian Garand* | 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* | Cellular automata and crystal plasticity modelling for metal additive manufacturing *Majid Kavousi, Patrick McGarry, Peter McHugh and* **Sean Leen** | Prediction of longitudinal seam weld quality in multi-chamber aluminium extrusion **Eren Can Sariyarlioglu**, *Torgeir Welo 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* | Characterization of the superplastic behavior of a Ti6Al4V-ELI alloy bilayer sheet **Pasquale Guglielmi**, *Antonio Piccininni, Angela Cusanno, Lorenzo Vaiani, Antonio Emmanuele Uva and Gianfranco Palumbo* | Investigation of variation of triaxiality and lode angle parameter values in deep drawing process **Tolunay Güzelderen** *and Haluk Darendeliler* | Characterization of recycled polyethylene terephthalate (rPET) – impact of proportion of virgin and recycled PET on mechanical strength **Thanh Tung Nguyen**, *Yun Mei Luo and Luc Chevalier* |

| Time | Friday 26.04.24 | | | | | | |
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| 9:40-10:00 | Multi-sensor in-process monitoring of WAAM: Detection of process instability in electrical signals **Sarra Oueslati**, *Elodie Paquet, Mathieu Ritou, Farouk Belkadi and Philippe Le Bot* | 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* | Numerical simulation of the extrusion process with different FEM code approaches: Analysis of thermal field, profile speed, defects evolution and microstructure of hollow tubes **Riccardo Pelaccia**, *Marco Negozio, Sara Di Donato, Barbara Reggiani and Lorenzo Donati* | Methodology for the automated spatial mapping of heterogeneous elastoplastic properties of welded joints *Robert Hamill, Aleksander Marek, Allan Harte and* **Fabrice Pierron** | Warm forming of AA7075-T6: optimizing the heating time to maintain T6 condition **Hervé Laurent**, *Sylvain Royne and André Maillard* | Study on the effects of tool design and process parameters on the robustness of deep drawing **Christine Heinzel**, *Sebastian Thiery and Noomane Ben Khalifa* | Injection molding control parameter assessment by nested Taguchi design of simulation *Vasiliki Iliopoulou and* **George Vosniakos** |
| 10:00-10:20 | Real-time 3D printing defects detection using thermal imaging **Safouene Rhim**, *Hala Albahloul and Christophe Roua* | 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* | Optimization of working conditions and increase of productivity of aluminum hot extrusion press based on finite element analysis **Juan Llorca-Schenk**, *Praveen Hewage and Lasindu Gayashan* | A robust identification protocol of flow curve adjusting parameters using uniaxial tensile curve **Xavier Lemoine**, *Rémi Munier and Xavier Bellut* | Molecular dynamics simulation for determining dislocation strengthening coefficient in BCC iron **Naoki Miyazawa** *and Takayuki Hama* | Influence of intermediate shapes on the final accuracy and thickness distributions in multi-step incremental forming **Marthe Vanhulst**, *Hans Vanhove and Joost R. Duflou* | Investigation of the effects of gas-counter-pressure injection moulding on the properties and manufacturability of post-consumer recycled polypropylene **Anna Bortoletto**, *Enrico Bovo, Marco Sorgato and Giovanni Lucchetta* |

| Time | Friday 26.04.24 | | | | | | |
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| 10:20-10:40 | Processability of Aluminum-Matrix Composite (AMC) by ultrasonic powder atomization **Angelika Jedynak**, *Sebastian Härtel, Robert Pippig and Tomasz Choma* | 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* | 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* | Tension-compression asymmetry of ferritic stainless steel sheet **Koki Sekiya**, *Hyuga Higashii, Akira Taoka and Toshihiko Kuwabara* | 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) | | | | | | |

| Time | Friday 26.04.24 | | | | | | |
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| Room | Saint Exupéry Auditorium | Ariane 1 | Spot | Ariane 2 | Argos | Guillaumet 1 | Guillaumet 2 |
| MS Chairs | MS01 Didier Delaunay | MS13 Laurentiu Slatineanu and Margareta Coteata | MS03 Riccardo Pelaccia | MS11 Anne Habraken | MS05 Tudor Balan | MS07 Katia Mocellin | MS14 Adrian Korycki |
| 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* | 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** | 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* | A novel method to characterize low-temperature brittle failure of mild steels at various deep drawing pre-strains **Jan Bechler**, *Roald Lingbeek, Joshua Grodotzki and A. Erman Tekkaya* | 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 Mancia, Michela Simoncini, Giuseppe De Tommaso, Angelo Petriccione and* **Alfonso Martone** |
| 11:30-11:50 | Laser metal deposition of NbTaTiV refractory high entropy alloy **Eric Barth** *and Anis Hor* | Influences of line and contact impedance of the efficiency by non-conventional processes *Mathias Herzig,* **Hans-Peter Schulze** *and Oliver Kröning* | 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* | Computational thermo-mechanical process design by integrating crystal plasticity and phase field model **Kyung Mun Min**, *Hyuk Jong Bong and Myoung-Gyu Lee* | Enhancement of fracture strain during abrupt orthogonal strain-path changes in ferrite/martensite dual phase steel **Takashi Matsuno**, *Nanami Kinoshita, Keisuke Hokimoto, Takayuki Hama and Yoshiaki Honda* | 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* | Identification of the thermal conductivity of polymer materials during their crystallization **Rita Moussallem**, *Elissa El Rassy, Jalal Faraj, Nicolas Lefevre and Jean-Luc Bailleul* |

| Time | Friday 26.04.24 | | | | | | |
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| 11:50-12:10 | 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* | Virtual inline compensation by single point-tracking in free-form bending **Lorenzo Scandola**, *Viktor Böhm, Daniel Maier and Wolfram Volk* | | Modelling ductile fracture in Al alloy with crystal plasticity models **Mikhail Khadyko**, *Bjørn Håkon Frodal and Odd Sture Hopperstad* | A temperature-dependent crystal plasticity model for predicting cyclic loading behaviors of a magnesium **Hyuk Jong Bong** | Thermomechanical reverse flow forming of AISI 304L **Bahman Arian**, *Julian Rozo Vasquez, Lukas Kersting, Werner Homberg, Frank Walther and Ansgar Trächtler* | 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 Víctor Fachinotti* |
| 12:10-12:30 | Microstructure mastering and fatigue behavior of duplex stainless steel obtained with laser powder bed fusion **Maxime Piras**, *Anis Hor and Eric Charkaluk* | Investigation of the influences on the indentation of tubes under lateral loads by segmented forming tools using DoE **Jonas Reuter**, *Apostolos Aslanidis and Bernd Engel* | 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 Fehlemann**, *Manuel Henrich, Martina Müller, Markus Könemann, Thomas Bergs and Sebastian Münstermann* | Parametric failure limit detection for the sheet metal forming of a Floating Photovoltaic (FPV) aluminum alloy structure **Sigbjørn Tveit**, *Aase Reyes and Emrah Erduran* | Modular 3D roller straightening – A new approach to straightening and forming of spring steel wires (X10CrNi18-8) **Frederik Dahms** *and Werner Homberg* | 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* |
| 12:30 - 14:00 | Lunch break (Caravelle 1) | | | | | | |

| Time | Friday 26.04.24 | | | | | | |
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| Room | Saint Exupéry Auditorium | Ariane 1 | Spot | Ariane 2 | Argos | Guillaumet 1 | Guillaumet 2 |
| MS Chairs | MS01<br><br>Catherine Mabru | MS13<br><br>Luca Bocarusso and Margareta Coteata | MS03<br><br>Marco Negozio | MS11<br><br>Lionel Leotoing | MS05 and MS09<br><br>Tudor Balan and Miroslav Halilovič | MS07<br><br>Katia Mocellin | MS14<br><br>Christian Garnier |
| 14:00-14:20 | Artificial intelligence approaches for enhanced coating performance **Alessia Serena Perna**, *Luigi Carrino, Alessia Auriemma Citarella, Fabiola De Marco, Luigi Di Biasi, Genoveffa Tortora and Antonio Viscusi* | Process analysis using adapted Rogowski coil for nonconventional processes *Haytham Darawish, Mathias Herzig, Hans-Peter Schulze and* **Oliver Kröning** | Characterization and modelling of grain growth in Zr-Nb alloys: niobium concentration influence **Pauline Hahn**, *Alexis Gaillac, Baptiste Flipon, Madeleine Bignon, Nathalie Bozzolo and Marc Bernacki* | High strain rate investigation on the mechanical anisotropy induced by SLM technology on a 3D printed steel **Edoardo Mancini**, *Mattia Utzeri, Gabriele Cortis, Daniele Cortis, Donato Orlandi, Luca Di Angelo, Luca Cortese and Marco Sasso* | The non-proportional loading of mild steel **Sumit Hazra**, *Sisir Dhara, Scott Taylor and Łukasz Figiel* | Study on the numerical prediction quality of material models regarding springback of hollow embossed metallic bipolar half-plates **Maxim Beck**, *Celalettin Karadogan, Patrick Cyron, Kim Rouven Riedmüller and Mathias Liewald* | Development of novel composites of incompatible barrier polymers and their optimal processing conditions for recyclable thermoformable food packaging sheet **Alain Akiki**, *Jean-Luc Bailleul, Elissa El Rassy, Georges Challita and Rouaida Abou Naccoul* |
| 14:20-14:40 | 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* | Effect of process parameters on final geometry and quality in hot tube spinning process **Nagihan Erdem**, *Murat Gunes and Mehmet Yigit* | Analysis of deformation behavior and microstructure evolution of 2219-O aluminum alloy and AZ31-B magnesium alloy under low-frequency vibration assisted compression **Ye Tian**, *Wen Zhang, Weicai Shen, Xincun Zhuang and Zhen Zhao* | Investigations of strain rate sensitivity under different stress triaxialities for DC04 **Lorenz Maier**, *Edgar Marker, Fabian Schulz and Wolfram Volk* | Predicting edge fracture in quenching and partitioning steels with fully anisotropic fracture model *Zinan Li, Fuhui Shen, Yuling Chang, Junying Min and* **Junhe Lian** | Characterization of the wrinkling limit curve using in-plane compression tests **João Magrinho**, *João Santos and Beatriz Silva* | 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* |

**Airbus Visit 14:30 to 16:00**

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| 14:40-15:00 | Influence of deposition strategy on porosity in powder-feed Directed Energy Deposition (DED) **Neha Devi Dhoonooah**, Kamel Moussaoui, Frederic Monies, Walter Rubio and Redouane Zitoune | Nano-texturing orientation effect on the piercing behavior of five stacked amorphous electrical steel sheets **Tomomi Shiratori**, Kentaro Ito, Suguri Furuhata and Tatsuhiko Aizawa | Prediction of the microstructure evolution during the Friction Stir Extrusion of a AA6061 aluminum alloy **Sara Bocchi**, Marco Negozio, Claudio Giardini and Lorenzo Donati | Influence of manufacturing defaults on the behavior of 3d printed lattice structures with a multiscale Data-Driven approach **Clément Court** | The effect of friction compensation on the slope of flow curves obtained by stack compression tests **Gábor J. Béres**, Martin L. Kölüs and Richárd Borbély | Optimization of the heating parameters of a robotized hot incremental forming of polymer **Valentin Duarte Rocha**, Laurence Giraud Moreau and Abel Cherouat | Recycling of thermoplastic materials: Development of a self-adaptive process to the recycled materials **Elena Farah**, Ghinwa El Hajj Sleiman, Eric Le Gal La Salle and Jean-Luc Bailleul | |
| 15:00-15:20 | A multiscale analysis of 316L stainless steel microstructures for WAAM manufacturing tool prediction **Robin Kromer** and Corinne Arvieu | Perforation resistance of some materials in 3D printed parts **Mihaela Nicolau**, Adelina Hriţuc, Mihalache Marius Andrei, Gheorghe Nagit, Petru Dusa, Elisaveta Craciun, Adriana Munteanu, Oana Dodun and Laurentiu Slatineanu | Experimental, analytical and numerical analysis of the copper multi-pass drawing process Sara Di Donato, Marco Negozio, Riccardo Pelaccia, Barbara Reggiani and **Lorenzo Donati** | The prospects of implementation of artificial intelligence for modelling of microstructural parameters in metal forming processes **Nikolay Biba**, Olga Bylya, Denis Tretyakov, Andrei Shitikov, Artur Gartvig and Sergey Stebunov | Surrogate modelling for multi-objective optimization in high precision optics production **Anh Tuan Vu**, Hamidreza Paria, Tim Grunwald and Thomas Bergs | Strain rates in high velocity forming of foils **Lasse Langstädtler**, Björn Beckschwarte, Tobias Valentino and Tim Radel | Two-step forging of polyimide powders into small-/medium-sized gears with and without carbon fiber reinforcement Tatsuhiko Aizawa, **Tomohiro Miyataa**, and Kiyoyuki Endo | **Airbus Visit 14:30 to 16:00** |
| 15:20-15:40 | 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 | Manufacturing of a shape memory polymer composite actuator with embedded heater **Leandro Iorio**, Alice Proietti, Denise Bellisario, Fabrizio Quadrini and Loredana Santo | 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 Leotoing** | Determining the residual formability of shear-cut sheet metal edges by utilizing an ML based prediction model **Marcel Görz**, Adrian Schenek, Trong Quan Vo, Kim Rouven Riedmüller and Mathias Liewald | 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) | | | | | | | |
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| Room | Saint Exupéry Auditorium | Ariane 1 | Spot | Ariane 2 | Argos | Guillaumet 1 | Guillaumet 2 | |
| MS Chairs | MS01 Merve Nur Dogu | MS13 Luca Bocarusso and Margareta Coteata | | | MS09 Miroslav Halilovič | | MS14 Christian Garnier | |
| 16:10-16:30 | Differential thermal analysis to assist the design of corrosion-resistant high entropy alloys for Laser Powder Bed Fusion **Herrim Seidou**, *Anne Mertens, Jérôme Tchoufang Tchuindjang, Catherine Blondiau, Olivier Dedry, Angelo Oñate and Victor Tuninetti* | The influence of signal type and distance to the sound source on sound transmission through small 3D printed plastic panels *Adelina Hriţuc, Mihalache Marius Andrei, Oana Dodun, Gheorghe Nagit and* **Laurentiu Slatineanu** | | | Experimental investigation of heterogeneous mechanical tests for sheet metals **Mafalda Gonçalves**, *Briag Guegan, Sandrine Thuillier and António Andrade-Campos* | | Evaluation of thermal properties of PEEK samples made by MEX **Roberto Spina**, *and Nicola Gurrado* | **Airbus Visit 16:15 to 18:00** |
| 16:30-16:50 | Threaded connections in titanium sheets through local reinforcement by means of droplet deposition **Hans Vanhove**, *Ecem Ozden, Joost Duflou, Arnout Dejans and Oleksandr Kurtov* | | | | VForm-xSteels: virtual materials database **António Andrade-Campos**, *Afonso Campos, João Henriques, Lucius Filho, Marcos Túlio, Mariana Conde, Mafalda Gonçalves, Pedro Prates and Rúben Lourenço* | | | |