

20th CIRP Conference on Modeling of Machining Operations - Program						
Wednesday 21st May 2025						
From	To					
17:30	20:00	Early registration & Get together - Location: 'Houdain'				
Thursday 22nd May 2025						
From	To					
08:00	09:00	Registration				
09:00	09:45	Opening Session - Room: Marie Curie				
09:45	10:20	Keynote Session - KN 1 - Room: Marie Curie				
10:20	10:50	Coffee Break				
10:50	12:30	Paper Sessions				
Room Chair		Numerical, analytical and empirical modeling <i>La Fontaine</i> Mustapha Abouridouane	Multiphysics and multiscale modeling 25 Shreyes Melkote	Grinding, non-conventional and hybrid processes 23 Gorka Ortiz-de-Zarate	Surface conditioning and surface integrity of machined components 20 Aitor Madariaga	Machining of non-metallic materials <i>Marie Curie</i> Yigit Karpat
	10:50 11:10	Experimental validation and 3D finite element modelling of scratch-induced deformation in Ti-6Al-4V alloy Erkan Tur, Joseph Betts, Laurent Perge, Quanren Zeng, Alborz Shokrani	Molecular dynamics simulation and experimental study of laser-assisted machining of SiCp/Al composites Feijie Cui, Hang Zhang, Minghui Yang, Ben Deng, Jiawei Lv, Rong Yan, Fangyu Peng	Experimental and Numerical Analysis of Grinding Burn and Surface Layer Modification Depth after Case Hardening and subsequent Surface Grinding Gerrit Kuhlmann, Martin Hunkel, Lars Langenhorst, Carsten Heinzel	ManuSafeNextGen: Model-Based Manufacturing of Safety-Critical Components for Next Generation Engines – Part I: Methodology Markus Meurer, Tobias Kelliger, Nicklas Gerhard, Adrian Karl Ruppel, Adina Grimmert, Thomas Bergs	Modeling Process Forces in CFRP Grinding: Influence of Cutting Materials and Coolant on Process Force Behavior Alexander Brouschkin, Carsten Möller, Jan Hendrik Dege
11:10	11:30	Surface microstructuring by targeted burr formation using Ultrasonic Vibration Assisted Deformational Machining (UVADM) for improving polymer-metal bonding Mohammad Hossein Rezaei, Ingo Schaarschmidt, Hendrik Liborius, Niclas Hanisch, Philipp Steinert, Thomas Lampke, Andreas Schubert	A study of ultra-precision processing mechanism of SiC crystals by MD simulation Tiancheng Ai, Dongdong Xu, Yao Li, Xiaohai Peng	Determination of grain engagement based on real 3D wheel topography for modelling forces and surface during silicon carbide grinding Clement Lestremiau, Charly Euzenat, Frederic Rossi, Guillaume Fromentin, Freddy Guilbaud, Sebastien Denneulin	3D Numerical modelling of residual stresses induced in longitudinal turning of a TA6V titanium alloy Yassine Chakroun, Sangil Han, Thierry André, Mehmet Cici, Frédéric Valiorgue, Joël Rech	Exit delamination failure modelling during drilling of CFRP laminates Iker Urresti Espilla, Iñigo Llanos, Luis Norberto López de Lacalle
11:30	11:50	Simulation of grain refinement of Ti6Al4V alloy during laser-assisted cutting Binbin Xu, Xin Liu, Shijia Shi, Hongguang Liu, Jun Zhang	Determination of the NaCl electrolyte viscosity from reactive force field molecular dynamics simulations Arthur Riefer, Philipp Planitz, Gunnar Meichsner, Matthias Hackert-Oschätzchen	New Geometric Stability Maps for Predicting Unstable Lobe Regeneration During Shoe-Type Centerless Grinding with Tilting Shoes U.Guerricagoitia, J.Álvarez, D.Barrenetxea, M.García, U.Alonso	The role of the layer thickness on the surface integrity of LPBF AISI7Mg after turning Edoardo Ghinatti, Rachele Bertolini, Andrea Ghiotti, Stefania Bruschi	Mechanistic modeling of cutting forces in milling of unidirectional Glass Fiber Reinforced Polymer (UD-GFRP) Matthias Nütte, Edouard Rivière-Lorphèvre, Valentin Dambly, Pedro-José Arrazola, Ismail Lazoglu, Aurélie Granjon, François Ducobu
11:50	12:10	Forward design of temperature field in laser-assisted milling of Ti6Al4V alloy through numerical simulation Xin Liu, Hongguang Liu, Shijia Shi, Binbin Xu, Jun Zhang	A Multi-Physics Simulation Model for Universal Cutting Process based on an Enhanced CWE Extraction Method Chenghan Wang, Ting Yue, Dongdong Xu, Zhirong Liao, Jun Wu, Bin Shen	Simulation of ultrasonic-assisted grinding for improved efficiency in hard-to-machine materials: A direct approach to analyze material removal mechanisms Eckart Uhlmann, Bernhard Gülzow, Xinyu Zhang	Numerical study of parameters affecting surface integrity in machine hammer peening of AISI 4140 Zhaoyu Chen, Matthias Hettig, Jens Sölter, Daniel Meyer	Material Detection by Stack Drilling Monitoring and Reservoir Computing Luc Gerber, Pierre-André Rey, Mathieu Ritou, Mehdi Cherif
12:10	12:30	A Physically Based Constitutive Model for Predicting the Surface Integrity in Orthogonal Machining of AISI 52100 Steel Serafino Caruso, Stano Imbrogno, Luigino Filice, Domenico Umbrello	Improved coolant channel flow efficiency for grooving tools through simulation and additive manufacturing Patrick Fischmann, Sebastian Galland, Frederik Zanger	Enhancing surface integrity using a hybrid process combining simultaneous grinding and burnishing Yasmine Charfeddine, Sawsen Youssef, Jalila Sghaier, Hédi Hamdi	Experimental Investigation and Simulation of Laser Surface Heating and its Effects on Residual Stresses and Microstructure for AISI 52100 and H13 Ngoc Thai, Bin Shi, Hamid Ghorbani, Helmi Attia	Integrating Fiber-Loading Effects in Mechanistic Force Model for Carbon-Fiber-Reinforced Polymer (CFRP)-Composites Darshan S.-K. A.-Desai, Abir Bhattacharyya
12:30	14:00	Lunch Break				
14:00	14:30	Keynote Session - KN 2 - Room: Marie Curie				
14:30	14:50	Coffee Break				
14:50	16:30	Paper Sessions				
Room Chair		Numerical, analytical and empirical modeling <i>La Fontaine</i> Andreas Zabel	Material behaviour and tribological aspects in cutting 25 Domenico Umbrello	Grinding, non-conventional and hybrid processes 23 Bert Lauwers	Dynamics and stability of machining, and robotic machining 20 Ning He	Machining of non-metallic materials and non-conventional processes <i>Marie Curie</i> Frederik Zanger
	14:50 15:10	Coupled Eulerian-Lagrangian (CEL) simulation of the chip breaking in a single lip deep hole drilling process (SLD) Walther Maier, Johannes Ramme, Moritz Dingler, Hans-Christian Möhring	An Apparatus Design for Multiaxial Ductile Fracture: Application to AISI1045 Afonso V.L. Gregorio, Tiago E.F. Silva, José C. Outeiro, Carlos E.H. Ventura, Pedro Areias, Abilio M.P. de Jesus, Pedro Rosa	Molecular Dynamics Modeling of Nano-grinding Process of Copper Alloy with a Rotational Tool Nikolaos E. Karkalos, Angelos P. Markopoulos	An unsupervised prediction of robotic machining error for new tasks under historical tasks knowledge distillation Teng Zhang, Fangyu Peng, Xiaowei Tang, Zhao Yang, Rong Yan	Investigation on cutting fluid use in finish milling of polylactide (PLA) 3D-printed parts Margaux Lorenzoni, Laurent Spitaels, Edouard Rivière-Lorphèvre, Jérémy Odent, Rachid M'Saoubi, Liam Cloëz, Michaël Fontaine, François Ducobu
15:10	15:30	Investigations of Burr Formation in Single Point Planing with Varying Uncut Chip Thickness Gero Polus, Jannis Saelzer, Andreas Zabel, Dirk Biermann	Evaluation of different flow stress models for machining simulations of medium carbon steels Ahmet Semih Erturk, Amir Malakizadi, Ragnar Larsson	DEM Simulation of Abrasive Brushing Processes on Additively Manufactured Workpieces Anton Hoyer, Eckart Uhlmann	Three-dimensional cellular magnetorheological elastomer absorber for suppressing time-varying chatter in robotic milling Rui Fu, Xiaowei Tang, Jiawei Wu, Fangyu Peng, Rong Yan, Shihao Xin	Rheological properties and machinability in dry turning of neat PLA and PLA reinforced with hemp fibers Liam Cloëz, Michaël Fontaine, Thierry Barrière, Alexandre Gilbin
15:30	15:50	Simulation of chip formation for varying uncut chip thickness during vibration-assisted drilling with the CEL method L. Schumski, F. Ducobu, L. Langenhorst, J. Sölter, B. Karpuschewski	Modeling of friction in the presence of cooling lubricants B. Denkena, B. Bergmann, J. Schenzel	Transient 3D Simulation of electrolyte flow in a removal device for the determination of process input parameters according to DIN SPEC 91399 Nils Paucke, Alexander Thielecke, Richard Petermann, Gunnar Meichsner, Matthias Hackert-Oschätzchen	A Joint Electromagnetic Torsional Actuator for low-frequency chatter suppression in robotic milling Kai Sun, Xiaowei Tang, Shihao Xin, Fangyu Peng, Jiawei Wu, Ming Zhong	Influence of operating parameters on the mechanical and geometric properties of 316L Stainless Steel structures fabricated by WAAM-CMT Mohamed Belhadj, Sana Werda, Robin Kromer, Philippe Darnis
15:50	16:10	Development of a Coupled Eulerian-Lagrangian (CEL) Model for Broaching: Analysis of Cutting Forces and Chip Morphology M. H. Boulares, C. Courbon, C. Bonnet, T. Mabrouki, J. Rech	Two Faces of the Same Cutting Tool: A Tribological Perspective Carlos E.H. Ventura, Afonso V.L. Gregório, Lara S.M. Fernandes, Pedro A.R. Rosa	Predictive Maintenance of Wire Electrical Discharge Machining Using Long Short-Term Memory Networks for Improved Process Control Namadi Vinod Kumar, D. Chakradhar	Discrete-superposition Mechanism of Multiple Constraints for Robotic Machining Posture Twin Planning Shengqiang Zhao, Fangyu Peng, Juntong Su, Xiaowei Tang, Rong Yan	Methodology for element selection and clustering in multi-axis directed energy deposition simulation Severin Maier, Theo Habenicht, Maximilian Hoffmann, Haojiang Yu, Gernot Mauthner, Chong Teng, John Fortna, Friedrich Bleicher
16:10	16:30	Using plunging-type testing to investigate process mechanics at micro scale machining Syed Ahsan Aadeeb, Yigit Karpat	Wear behaviour of TiAlN/DLC coating in milling of AMPCOLOY®83 Fábio Freitas, Naiara Sebbe, Rafaela Casais, Francisco Silva, Filipe Fernandes, Iván Iglesias, Rúben Costa	Structure and Validation of a Kinematic Surface Simulation Model for the Ultrashort-Pulse Direct-Laser-Writing Proces Fabian Wieland, Eric Gärtner, Sebastian Wieland	Feed rate optimisation scheme in robotic machining operations for dynamic error compensation Valentin Dambly, Bryan Olivier, Edouard Rivière-Lorphèvre, François Ducobu, Olivier Verlinden	Modeling the Residual Stress Evolution in Wire-Arc Directed Energy Deposition with Interlayer Machining Interventions Akshar Kota, Asif Rashid, Shreyes N. Melkote
16:30	16:50	Coffee Break				
16:50	18:10	Paper Sessions				
Room Chair		Numerical, analytical and empirical modeling <i>La Fontaine</i> Amir Malakizadi	Monitoring, diagnostics and optimization of machining processes 25 Lucas Equeter	Thermal effects and part distortion 23 Guillaume Fromentin	Dynamics and stability of machining, and robotic machining 20 Valentin Dambly	Machining of non-metallic materials and non-conventional processes <i>Marie Curie</i> Ni Chen
	16:50 17:10	Numerical chip formation simulations of AISI 304 steel with varying cutting tools Erik Krumme, Kai Donnerbauer, Jannis Saelzer, Andreas Zabel, Frank Walther	Application of machine learning for tool condition monitoring using sensor integrated tooling Dylan Drew, Joseph Betts, Shamin Sadrafshari, Ali Mohammadi, Alborz Shokrani	Coupled CFD model of tool environment and workspace to determine the convective heat transfer in jet cooling of milling processes in machine tools Steffen Brier, Alexander Geist, Janine Glanzel, Christian Naumann, Joachim Regel, Martin Dix, Steffen Ihlenfeldt	Undercut error and compensating trajectory simulation versus experiments comparison when contour turning of Inconel 718 thin-walled parts Philippe Lorong, Jérémy Troisgros, Mikhail Guskov, Richard Chatain, Théo Dorlin, Habib Karaoui	Enhancing the Surface Quality of Additively Manufactured 316 Stainless Steel Revolving Parts through Electrochemical Polishing Wenjian Cao, Andrea Ghiotti, Stefania Bruschi
17:10	17:30	Finite Element Modeling of Molten Pool Geometry During Laser Surface Treatment of Ti6Al4V Alloy Maria Rosaria Saffioti, Serafino Caruso, Giovanna Rotella, Domenico Umbrello	Tool-holder integrated printed piezoceramic sensors for process state classification and tool-wear progress evaluation in turning Miguel Panesso, Jan Berthold, Lucas Hamm, Zongshuo Li, Welf-Guntram Drossel, Thomas Bergs	Thermal assessment and energy analysis in the machining of titanium alloys using SPRT Imane El Hatimi, Vincent Wagner, Gilles Dessein	Sensitivity analysis for considering the process dynamics during the calibration of process force models Melina Wenzel, Daniel Welling, Dirk Biermann, Petra Wiederkehr	Prediction of crater induced failure of coated wires during wire EDM of Ti-6Al-4V alloy Sanghamitra Das, Shrikrishna N. Joshi
17:30	17:50	Effects of the Tool Microgeometry on Thermo-Mechanical Loads for Ti-6Al-4V Finishing Cutting Operations Mathieu Paillard, Frédéric Rossi, Hélène Elias-Birembaux, Gérard Poulachon, Mathieu Ritou, Nicolas Maury	Determination of the cutting forces from accelerations of a MEMS-based sensor-integrated milling tool P. Georgi, K. Güzel, H.-C. Möhring	A simplified numerical model to predict geometrical distortions of thin-walled aluminium airframe components Aitor Madariaga, Gorka Ortiz-de-Zarate, Zeeshan Youasf Warrach, Pedro José Arrazola	Process design for drilling of large diameter holes with cutting simulation Takashi Matsumura, Shoichi Tamura	AI-Enhanced Laser Drilling of Alumina Ceramics Priyanka Ghosh, Mohammed Begg, Yazan Qarout, Joseph Nix, Mostafizur Rahman, Sundar Marimuthu
17:50	18:10	Experimental and model-based investigation of cutting mechanisms when ultrasonic-assisted machining SiCf/SiCm ceramic matrix composites Mustapha Abouridouane, Thomas Bergs, Markus Meurer, Guido Wirtz		Effect of Radial Engagement and Feed Rate on the Thermal Evolution of Ti-6Al-4V alloys in Peripheral Milling Process Ivan Hamm, Hélène Elias-Birembaux, Frédéric Rossi, Gérard Poulachon, Nicolas Maury	A comparison of process damping modelling as local flank face interaction and as macroscopic modal feature in a time domain machining simulation Grigori Altshul, Mikhail Guskov, Phillipe Lorong	A thermo-mechanical finite element model to predict thermal cycles and residual stresses in directed energy-deposition technology Edison Bonifaz, Jianzhi-Li
19:00	22:30	Conference Dinner				

20th CIRP Conference on Modeling of Machining Operations - Program					
Friday 23rd May 2025					
From	To				
08:00	08:30	Registration			
08:30	09:50	Paper Sessions			
Room Chair		Numerical, analytical and empirical modeling <i>La Fontaine</i> Jens Sölter	Monitoring, diagnostics and optimization of machining processes 25 Cédric Courbon	Artificial intelligence and digital twins for machining 23 Dongdong Xu	Dynamics and stability of machining, and robotic machining 20 Takashi Matsumura
	08:30 08:50	Development and optimization of a finite element model with remeshing and Lagrangian formulation for the simulation of high deformation manufacturing processes <i>Ignacio-Manuel Valdivia-Maldonado</i> , Ainara Oruna, Gorka Ortiz-de-Zarate, François Ducobu, Guénaél Germain, Pedro J. Arrazola	Prediction of Cutting Tool Condition in Milling Using Optimization and Non-Optimization Techniques <i>Amirmohammad Jamali</i> , Volker Schulze	Integrating Hybrid Physics-Data Approaches for Enhanced Cutting Force Modeling in Digital Twins of Helical End Mills <i>Yuan Jing</i> , Guanchen Gong, Albrecht Hänel, Steffen Ihlenfeldt	Identification of Cutting Coefficients from Multiple Milling Tests <i>Edouard Rivière-Lorphèvre</i> , Martin Van Hee, Thomas Beuscart, François Ducobu
	08:50 09:10	Investigation of biological tissue cutting for minimal tissue damage using finite element simulation <i>Urara Satake</i> , Ryusei Senda, Ryutarō Samba, Toshiyuki Enomoto	Process analysis and tool wear monitoring with spindle motor power and current signals in longitudinal and face turning <i>Sangil Han</i> , Emilie Viéville, Mehmet Cici, Thierry André, Frédéric Vallorgue, Joël Rech	Cluster-based prediction of chatter vibrations in milling operations <i>Felix Finkeldey</i> , Florian Wöste, Daniel Werner, Raphael Schönecker, Dirk Biemann, Petra Wiederkehr	Effect of tool cavity conditions on damping, chatter mitigation, and surface quality in internally cooled milling tools Ramazan Hakkı Namlu, Hakan Dogan, <i>Muhammet Ozsoy</i>
	09:10 09:30	Numerical Simulation of Cutting-Induced Grain Refinement in Machining Process under Dry and MQL Conditions of Titanium Ti-5553 Alloy <i>Yusuf Kaynak</i> , Melih Ozkutuk, Ozhan Kitay	On machine 3D reconstruction of endmill tool wear <i>Joseph Betts</i> , Shamin Sadrafshari, Ali Mohammadi, Alborz Shokrani	Seamless Edge-Server Collaboration for Real-Time Digital Twin in Machining Process <i>Cemile Besirova</i> , Yigit Anil Yucesan, Mehmet Alper Sahin, Ugur Uresin, Ismail Lazoglu	Performance and efficiency of co-simulation for milling operations in robotic machining <i>Hugo Dantinne</i> , Valentin Dambly, Olivier Verlinden, François Ducobu, Edouard Riviere-Lorphevre, Bryan Olivier
	09:30 09:50	An improved numerical model for prediction of residual plastic strain in machining of Ti6Al4V titanium alloy concerning cutting edge microgeometries Cheng Hu, Kejia Zhuang, <i>Hélène Elias-Birembaux</i> , José Outeiro	Analysis and Monitoring the Initial Tool Damage and Coating Failure when Hard Milling Vanadis 4E with TiAlN Coated PcbN <i>Oleksandr Gutnichenko</i> , Sandra Gordon Pozuelo, Luis Llanes, Volodymyr Bushlya	Development and implementation of an architecture for cloud-based monitoring in machining, focusing on high performance applications Grigorios Kotsakis, Christos Papaioannou, Thanassis Souflas, Dimitris Tsolkas, Alex Kakyris, Panagiotis Gounas, Panagiotis Stavropoulos	Comparing the Chatter Characteristic in Milling of Ti6Al4V Alloy with and without Laser Assistance <i>Qi Liu</i> , Xichun Luo, Wenkun Xie, Zhengjian Wang, Xiuyuan Chen, Rongkai Tan
09:50	10:10	Coffee Break			
10:10	11:10	Paper Sessions			
Room Chair		Numerical, analytical and empirical modeling <i>La Fontaine</i> I.S. Jawahir	Monitoring, diagnostics and optimization of machining processes 25 Edouard Rivière-Lorphèvre	Artificial intelligence and digital twins for machining 23 Zhirong Liao	Dynamics and stability of machining, and robotic machining 20 Ismail Lazoglu
	10:10 10:30	A numerical approach to investigate the microstructural damage of hard cemented carbides <i>Muslum Guven</i> , Cyprien Wolff, Mohammed Nouari	Acceleration-based spindle monitoring based on geometric error motions <i>Aaron Cornelius</i> , Gregory W. Vogl, Ryan Hall, Yongzhi Qu	Data-Driven Approach to Identify Acoustic Emission Source Motion and Positioning Effects in Laser Powder Bed Fusion with Frequency Analysis <i>Ming Wu</i> , Shivam Shukla, Bey Vrancken, Mathias Verbeke, Peter Karsmakers	A model for chatter stability enhancement through lattice support structures <i>George E.J. Robinson</i> , Ozgur Poyraz, Neil D Sims, Pete Crowthorh
	10:30 10:50	Optimal modelling of Colding parameters for round inserts with respect to tool use-time criteria <i>Juan Manuel Bello Bermejo</i> , Berk Saatçi, Daniel Johansson, Soren Hägglund, Jan-Eric Ståhl, Christina Windmark	Computational roundness error prediction for internal turning operations <i>Daniel Gutsche</i> , Hans-Christian Möhring	Deep Learning-based Characterization of Fused Filament Fabrication from Temporal Thermal Data <i>Ming Wu</i> , Jie Zhang, Robrecht Abts, Eleonora Ferraris, Mathias Verbeke	Vibration Based Honeycomb Core Milling Diagnostics Using Machine Learning Approaches <i>Dominique Knittel</i> , Hamid Makich, Isidore Messer, Mohammed Nouari
	10:50 11:10	Modeling topographical variations of cutting edges to consider the stochastic behavior of tool wear in milling simulations <i>Jim A. Bergmann</i> , Petra Wiederkehr	Cutting Force/Temperature Multicriteria Optimization for a Milling Process <i>Abraham Kalu-Uka</i> , Peter Eberhard	Do LLMs understand shapes? Exploring STL files for automatic CAD feature recognition <i>Oihana Garcia</i> , Kerman Lopez de Calle, Jon Ander Sarasua	Optimization of an aerostructural machining process using physics-guided Bayesian stability modelling <i>Aaron Cornelius</i> , Jaydeep Karandikar, Judy Burns, Robert Burns, David Burns, Julia Daugherty, Clint Farrow, Matthew Yurescko, Kevin Kim, Jacob Mekelburg, Richard Grant, Thomas Delio, Clay Dosmann, Chris Kantner, Zhigang Wang, Tony Schmitz
11:10	11:30	Coffee Break			
11:30	12:30	Paper Sessions			
Room Chair		Numerical, analytical and empirical modeling <i>La Fontaine</i> Lars Langenhorst	Numerical, analytical and empirical modeling 25 Joël Rech	Artificial intelligence and digital twins for machining 23 Qi Liu	Sustainable machining 20 Alborz Shokrani
	11:30 11:50	A Novel Approach for Modelling Loads on Profiled Cutting Tools <i>Jan Wolf</i> , Rocco Eisseler, Nithin Kumar Bandaru, Martin Dienwiebel, Hans-Christian Möhring	Hybrid Modeling Approach for Predicting Tool Temperature in Metal Cutting Processes <i>Hui Liu</i> , Markus Meurer, Thomas Bergs	A Threshold-Free and Label-Free Pipeline for Adaptive Pulse Classification in Electrical Discharge Machining <i>Ming Wu</i> , Zequan Yao, Robrecht Abts, Peter Karsmakers, Mathias Verbeke, Dominiek Reynaerts	Enhancing Energy Efficiency in Machining through Digital Twin Technology: Predictive Modeling of Thermal Loads in Machine Tool Spindles <i>Mohammad Bani-Hani</i> , Nico Hanenkamp
	11:50 12:10	A Predictive Method for Cumulative Tool Wear in Variable Cutting Speed Turning Operations <i>Andrea Abeni</i> , Alessandro Metelli, Aldo Attanasio, José Outeiro, Gerard Poulachon	Finite Element Modeling to Design Optimized TMD for Milling Tools <i>Mikel Etxebeste</i> , Gorka Ortiz-de-Zarate, Iñaki M. Arrieta, Pedro J. Arrazola	Digital twin driven thermal error control of linear axis for face gear grinding machine tool Mingming Li, Chi Ma, Jialan Liu, Giovanni Totis	Modelling the energy consumption of an industrial robot with different types of trajectory for machining tasks <i>Florian Delooz</i> , Valentin Dambly, François Ducobu, Edouard Rivière-Lorphèvre, Bryan Olivier
	12:10 12:30	Modelling the Bond Behavior and Tool Wear of Metal-Bonded Microfinishing Tools considering the Run-In Phase <i>Ines Heining</i> , Tailaiti Taiwupike, Petra Wiederkehr	Constitutive behavior study of copper alloy under cold and hot compression conditions towards LN2 assisted cutting <i>Baochen Li</i> , Yessine Ayed, Guénaél Germain, Jun Zhang	Real-Time Capable Identification of Spindle Bearing Loads Using Computer Simulation, Feed Drive Currents and Machine Learning Methods <i>Magnus von Elling</i> , Qiliang Jian, Matthias Weigold	Surface integrity of recycled aluminum alloys after turning Rachele Bertolini, Caterina Zanella, Andrea Ghiotti, <i>Stefania Bruschi</i>
12:30	14:00	Lunch Break			
14:00	15:20	Paper Sessions			
Room Chair		Numerical, analytical and empirical modeling <i>La Fontaine</i> Gérard Poulachon	Monitoring, diagnostics and optimization of machining processes 25 Pedro J. Arrazola	Artificial intelligence and digital twins for machining 23 Andrea Abeni	Sustainable machining 20 Pierre Dehombreux
	14:00 14:20	Meso-scale geometric modeling of cutting edges on vitrified bonded aluminum oxide grinding wheels for the multi-scale simulation of internal plunge grinding processes Nils Schmidt, Tim Furlan, Jan Peters, Monika Kipp, Stefan Kaschnitz-Biegl, Andreas Menzel, Friedrich Bleicher, Dirk Biemann	Analyzing Machining Cycle Time Anomalies via CNC and Operational Data <i>Noemie Vlamincq</i> , Michel Nicolas, Tariq Benamara, Herve Raddoux	Well-informed neural network: an approach for the prediction of the width of flank wear land in turning processes <i>S. Stemmer</i> , B. Papenberg, L. Langenhorst, J. Sölter, D. Meyer, A. Fischer, K. Tracht, B. Karpuschewski	Life Cycle Assessment of Cutting Tool Coatings <i>Ishrat Fairouz</i> and Alborz Shokrani
	14:20 14:40	Simulative approach to investigate the influence of tool deviations on the effective cutting conditions in gear skiving Emma Punsmann, Tassilo Arndt, Volker Schulze	The Online Monitoring for Milling Stability Boundary Considering Tool Wear <i>Yuyue Yu</i> , Xiaoming Zhang, Han Ding	Explainable AI for Tool Condition Monitoring using Explainable Boosting Machine <i>Lorenzo Colantonio</i> , Lucas Equeter, Pierre Dehombreux, François Ducobu	Performance evaluation of an oil-free cutting fluid in tapping <i>T. Walker</i> , M. Fontaine, X. Roizard, A. Gilbin, F. Lallemand
	14:40 15:00	Simulation-Based Enhancement of Flexure Hinges Machining for the Ariel Telescope M1 Mirror Riccardo Lilli, Daniele Gottini, Niccolò Grossi, Antonio Scippa	A generalized framework for predicting process robustness in the context of machining aero engine components <i>Lena Geißel</i> , Petra Wiederkehr	Implicitly labeled Forecasting based Tool Condition Monitoring in Machining Processes <i>Tim Reeber</i> , Hans-Christian Möhring	Evaluating Carbon Emissions of Hybrid Manufacturing Process: A Case Study on Additive and Subtractive Manufacturing Vasiliki C. Panagiotopoulou, Evangelia Xydea, Panagiotis Stavropoulos, <i>Thanassis Souflas</i>
	15:00 15:20	Estimation of Cutting Time in Polygonal Turning through Modeling of Tool Workpiece Interactions in Workpiece Coordinate System Madhur Pandya, Dhruv Narayan, Naresh Bhatnagar	A new coolant supply for solid end mills in HRSA alloy machining <i>Gaetano Massimo Pittalà</i>	Unsupervised Anomaly Detection using Vibration Signals for Milling Processes <i>Nicolas Ringler</i> , Dominique Knittel, Mohammed Nouari, Jean-Christophe Ponsart, Abderrahmane Yakob, Daniel Romani	Product carbon footprints on machine tools: An OPC UA based automation approach <i>Sebastian Karnapp</i> , Magnus von Elling, Daniel Fuhrlander-Völker, Matthias Weigold
15:20	15:25	Transfer			
15:25	15:45	Closing Session - Location: La Fontaine			
15:45	16:00	End of the conference			