

# CIRPE 2021 Detailed Programme

	Day 1	Day 2	Day 3			
1.45 pm - 2.00 pm	<b>Opening session</b> Zoom link : <a href="https://us02web.zoom.us/j/83864601445">https://us02web.zoom.us/j/83864601445</a>					
2.00 pm - 2.40 pm	<b>Keynote 1</b> : Prof. Dr.-Ing. Birgit Vogel-Heuser, <i>Managed control software evolution as a key success factor to sustainable, resilient, and agile manufacturing and service operation</i> Zoom link : <a href="https://us02web.zoom.us/j/83864601445">https://us02web.zoom.us/j/83864601445</a>	<b>Keynote 2</b> : Prof. Fei Tao, <i>Digital Twin Driven Smart Manufacturing</i> Zoom link: <a href="https://us02web.zoom.us/j/87999422807">https://us02web.zoom.us/j/87999422807</a>	<b>Keynote 3</b> : Prof. Ramy Harik, <i>Adaptive and Agile Pharmaceutical Manufacturing through Cognitive Cyber-Physical Eco-system</i> Zoom link : <a href="https://us02web.zoom.us/j/86420563297">https://us02web.zoom.us/j/86420563297</a>			
2.40 pm - 2.45 pm	<b>Break and session change</b>					
2.45 pm - 4.10 pm	<b>Resilient and agile production systems I</b> Zoom link: <a href="https://us02web.zoom.us/j/87382306477">https://us02web.zoom.us/j/87382306477</a> Session chair: Anne-Laure Ladler	<b>Manufacturing I</b> Zoom link: <a href="https://us02web.zoom.us/j/83340609407">https://us02web.zoom.us/j/83340609407</a> Session chair: Petra Wiederkehr	<b>Resilient and agile production systems II</b> Zoom link: <a href="https://us02web.zoom.us/j/85029411889">https://us02web.zoom.us/j/85029411889</a> Session chair: Michael Saidani	<b>Manufacturing II</b> Zoom link: <a href="https://us02web.zoom.us/j/84724833982">https://us02web.zoom.us/j/84724833982</a> Session chair: Enrico Simonetto	<b>Customization and configurators</b> Zoom link: <a href="https://us02web.zoom.us/j/84013212698">https://us02web.zoom.us/j/84013212698</a> Session chair: Joanna Daaboul	<b>Digital twins</b> Zoom link: <a href="https://us02web.zoom.us/j/83646352924">https://us02web.zoom.us/j/83646352924</a> Session chair: Maria Chiara Magnanini
	A Deep Reinforcement Learning Based Scheduling Policy for Reconfigurable Manufacturing Systems <i>Jachens Tang</i> , Konstantinos Salonitis Cranfield University, UK	Chip formation mechanism during orthogonal cutting of rubber microparticles and silica nanoparticles modified epoxy polymers <i>Maris Monoranu</i> , Hassan Ghadbeigi, Patrick Fairclough, Kevin Kerrigan University of Sheffield, UK	Circular economy as a key for industrial value chain resilience in a post-COVID world: what do future engineers think? <i>Michael Saidani</i> (a,b), Francois Cluzelet(b), Bernard Yannou(b), Harrison Kim(a) (a) University of Illinois at Urbana-Champaign, USA (b) Université Paris-Saclay, France	The Effect of a Polymer-Based Tuned Mass Damper on the Vibration Characteristics of an Anti-Vibration Boring Bar <i>Alireza Alilabbarji</i> (a), George Moraru(a), Philippe Veronis(a), Yannick Groll(b) (a) Ecole Nationale Supérieure d'Arts et Métiers, France (b) SECO Tool Tooling Systems, France	Innovative Framework to manage New Product Development (NPD) Integrating Additive Manufacturing (AM) and Agile Management <i>Júlia Fornaziero de Almeida</i> , Daniel Capaldo Amaral, Reginaldo Teixeira Coelho University of São Paulo, Brazil	Effect of work-force availability on manufacturing systems operations of job shops <i>Maria Chiara Magnanini</i> , Marcello Colledani, Aleksandr Melnychuk, Davide Caputo Politecnico di Milano, Italy
	Differentiating Industrial Internet of Things platforms from a value network-oriented perspective <i>Fabian Hartner(a)</i> , Ulrich Löwen(b), Jörg Franke(a) (a) Friedrich-Alexander University, Germany (b) Siemens AG Technology, Germany	Economic assessment of stress-based payment models <i>Patrick Standa(a)</i> , Oliver Kohn(a), <i>Enno Lang(a)</i> , Joachim Meternich(a), Matthias Wegold(a), Arne Buchwald(b,c) (a) Institute for Production Management, Germany (b) Vlerick Business School, Belgium (c) EBS Business School, Germany	Assessment of Supply Chain Management Resilience within Saudi Medical Laboratories during COVID-19 Pandemic <i>Amani Alami, Najwa Adlan, Raima Lahyani</i> Alfaisal University, Saudi Arabia	Impact of cutting parameters on the mechanical properties of BTA deep drilled components under quasi-static compression <i>Simon Strodick</i> , Robert Schmidt, Lars Gerdes, Andreas Zabel, Dirk Biermann, Frank Walther TU Dortmund University, Germany	Four Independent Knowledge Domains to Enable an Agile, Distributed Development of User-Centred Engineering Configurators <i>Eike Schäffer(a)</i> , Andrea Mayr(a), <i>Tobias Reichenstein(a)</i> , Sara Shafae(b), Jörg Franke(a) (a) Friedrich-Alexander University, Germany (b) Technical University of Denmark, Denmark	Towards planning and control in cognitive factories - A generic model including learning e cities and knowledge transfer across system entities <i>Marco Wurster</i> , Yannick Exner, Jan-Philipp Kaiser, Nicole Stricker, Gisela Lanza Karlsruhe Institute of Technology, Germany
	Towards a model assessing supply chain resilience strategies Lauriane Bret, Maxime Dusaud, Lucas Metral, <i>Anne-Laure Ladler</i> , Laraine Trilling INSA Lyon, France	Evaluation of a novel approach for considering damping effects in a process force model of a geometrically-physically-based milling simulation <i>Florian Wosta</i> , Tobias Siebrecht, Petra Wiederkehr TU Dortmund University, Germany	Resilience, agility and risk management in production ramp-up <i>Eliham Jelodar Mamaghani</i> , Khaled Medini Mines Saint-Etienne, UMR 6158 LIMOS, France	Adapted Process Strategies in Front Face Flow Drilling and Thread Forming of Lightweight Casting Materials <i>Nils Felinks</i> , Till Overberg, Yvan Sarrafra, Frank Walther, Dirk Biermann TU Dortmund University, Germany	Attribute-based integrated product process configurator for mass customization Rachel Saboni, Lucie Vantelle, <i>Joanna Daaboul</i> , Julien Le Duigou Université de technologie de Compiègne, France	Manufacturing resilience and agility through processes digital twin: design and testing applied in the LPBF case <i>Alexios Papacharalampopoulos</i> , Christos Michail, Panagiotis Stavropoulos University of Patras, Greece
	A Markov Chain model for the performance evaluation of manufacturing lines with general processing times <i>Salvatore Scirungo</i> , Tullio Tollo Politecnico di Milano, Italy	Adhesion of Inconel 718 on Uncoated Tungsten Carbide Inserts in Interrupted Orthogonal Machining under MQL <i>Youssef Alammari</i> , Ivan Iovkov, Jannic Saetzer, Tobias Wolf, Dirk Biermann TU Dortmund University, Germany	Supply chain resilience vs. COVID-19 disruptions during the second wave <i>Rahma Lahyani</i> , Faisal Alisaad, Luqian Merdad, May Alzamel Alfaisal University, Saudi Arabia	Flexible Incremental Roller Flanging process for metal sheets profiles <i>Enrico Simonetto(a)</i> , Andrea Ghottola(a), Stefania Bruschi(a), Stefano Filippini(b) (a) Università di Padova, Italy (b) MSD s.r.l. Italy	Process-Driven Web Platform based on the BPMN-Standard and Process Engines <i>Eike Schäffer(a)</i> , <i>Marvin Schobert(a)</i> , Tobias Reichenstein(a), Andreas Selmaier(a), Volker Slieth(d), Markus Herthofer(b), Matus Mala(c), Jörg Franke(a) (a) Friedrich-Alexander University, Germany (b) Ekaenta GmbH, Germany (c) Flowable Germany GmbH, Germany (d) Hochschule University of Technology, Germany	Reinforcement Learning Based Production Control of Semi-automated Manufacturing Systems <i>Leonard Overbeck</i> , Adrien Hugues, Marvin Carl May, Andreas Kuhnle, Gisela Lanza Karlsruhe Institute of Technology, Germany
4.10 pm - 4.15 pm	<b>Break and session change</b>					
4.15 pm - 5.40 pm	<b>Smart manufacturing</b> Zoom link: <a href="https://us02web.zoom.us/j/87382306477">https://us02web.zoom.us/j/87382306477</a> Chair : Makenzie Keepers	<b>Additive manufacturing</b> Zoom link: <a href="https://us02web.zoom.us/j/83340609407">https://us02web.zoom.us/j/83340609407</a> Chair: Dimitris Mourtzis	<b>Process monitoring and quality management</b> Zoom link : <a href="https://us02web.zoom.us/j/85029411889">https://us02web.zoom.us/j/85029411889</a> Chair : Alessandro Simeone	<b>Design - Robotics</b> Zoom link : <a href="https://us02web.zoom.us/j/84724833982">https://us02web.zoom.us/j/84724833982</a> Chair : Sathish Kasilingam	<b>Sustainable manufacturing</b> Zoom link: <a href="https://us02web.zoom.us/j/84013212698">https://us02web.zoom.us/j/84013212698</a> Chair: Pierre-Alain Yvars	<b>Operator assistance</b> Zoom link: <a href="https://us02web.zoom.us/j/83646352924">https://us02web.zoom.us/j/83646352924</a> Chair: Michela Dalle Mura
	A Bibliometric Analysis of Physics-Based and Data-Driven Hybrid Modeling <i>Sathish Kasilingam</i> , Makenzie Keepers, Thorsten Wuest West Virginia University, US	A Digital Twin architecture for monitoring and optimization of Fused Deposition Modeling processes Dimitris Mourtzis, Theodoris Togiias, <i>John Angelopoulos</i> , Panos Stavropoulos University of Patras, Greece	A machine vision-based automatic inspection system for power station coal bunkers maintenance Nengsheng Bao(a), Huihui Kuang(a), Alessandro Simeone(b), Longfei Zhu(a), <i>Yuchen Fan(a)</i> (a) Shanghai University, China (b) Politecnico di Torino, Italy	A Microservice- and AutomationML-based Reference Architecture for an Engineering Configurator Web Platform Eike Schäffer(a), <i>Lars Niklas Penzke(b)</i> , Matthias Bartels(b), Matthias Brosig(a), Bernd Kuhnkennter(b), Jörg Franke(a) (a) Friedrich-Alexander-University, Germany (b) Ruhr-University Bochum, Germany	Effect of Lean4.0 on Sustainability Performance: A Review <i>Marzhan Kabzhassargali</i> , Anara Kuzharova, Dinara Dikranbayeva, Mert Güneş, Ali Turkyilmaz Nazarbayev University, Kazakhstan	A proposal of an assembly workstation for car panel fitting aided by an augmented reality device <i>Michela Dalle Mura</i> , Gino Dani University of Pisa, Italy
	Multi-variate time-series for time constraint adherence prediction in complex job shops <i>Marvin Carl May(a)</i> , Lukas Behnen(a), Andrea Holzer(b), Andreas Kuhnle(a), Gisela Lanza(a) (a) Karlsruhe Institute of Technology, Germany (b) Inficon Technologies AG, Germany	Exploration of the potential of polymer 4D printing: Experiments on the printing quality and the impact of temperature and geometry on the shape-changing effect <i>Li Yi</i> , Kevin Gutzeit, Svenja Ehmsen, Patrick Kölsch, Moritz Glatt, Jan C. Aurich TU Kaiserslautern, Germany	Data-driven quality monitoring of bending processes in hairpin stator production using machine learning techniques <i>Andreas Mayr(a)</i> , Philipp Röll(a), Daniel Winkler(b), Maximilian Enzmann(b), Benjamin Bickel(a), Jörg Franke(a) (a) Friedrich-Alexander-University, Germany (b) BMW Group, Germany	Design of a parallel robot with additively manufactured flexure hinges for a cryogenic work environment <i>Philipp Jahnke</i> , Frank Bruggel, Annika Raatz(a) (a) Leibniz Universität Hannover, Germany (b) Fraunhofer Institute for Biomedical Engineering, Germany	The transition to environmentally sustainable production: a roadmap timeline methodology <i>Youssef Haddad(a)</i> , Emanuele Pagnone(a), Mohamed Afy-Shararah(a), Nicholas Pearson(b), Konstantinos Salonitis(a) (a) Cranfield University, UK (b) GKN Aerospace, UK	Extracting problem related entities from production chats to enhance the data base for assistance functions on the shop floor <i>Marvin Müller(a)</i> , Ji-Un Lee(b), Nicholas Frick(a), Lorenz Singler(b), Yvonne Gurevych(b), Joachim Meternich(a) (a) Institute of Production Management, Germany (b) Ubiquitous Knowledge Processing Lab, Germany
	Artificial neural network to predict the weld status in laser welding of copper to aluminum <i>Karthik Mathivanan(a)</i> , Peter Piessler(a) (a) Faculty of Science, Technology and Medicine, University of Luxembourg, 6 Rue Richard Coudenhove-Kalergi, L-1359 Luxembourg, Luxembourg	Development and implementation of a system for the automated removal of parts produced by Fused Deposition Modeling <i>Moritz Glatt(a)</i> , Sebastian Greco(a), Li Yi(a), Benjamin Kirsch(a), Jan C. Aurich(a) (a) Institute for Manufacturing Technology and Production Systems, Technische Universität Kaiserslautern, Gottlieb-Daemler-Str. 67663 Kaiserslautern, Germany	Image Based Quality Inspection in Smart Manufacturing Systems: A Literature Review <i>Milica Babic</i> , Mojiba A. Farahani, Thorsten Wuest West Virginia University, USA	Optimisation of the combined application planning and execution time utilising repeated PRM replanning for point-to-point sequences <i>Ivo Dekker</i> , Karel Kellers, Eric Demeester KU Leuven, Belgium	A Model-based Synthesis approach to system design correct by construction under environmental impact requirements <i>Pierre-Alain Yvars(a)</i> , Laurent Zimmer(b) (a)ISAIE-Supmecc, QUARTZ EA7393, 3 rue Fernand Hauwaë, 93407 Saint Ouen Cedex, France (b) Dassault Aviation, Direction de la prospective 71, quai Marcel Dassault, 92552 Saint Cloud, France	Synthetic datasets for Deep Learning in computer-vision assisted tasks in manufacturing <i>Christos Maniatis</i> , Nikolaos Nikolakis, Kosmas Alexopoulos University of Patras, Greece
	Trends in Machine Learning To Solve Problems In Logistics Anita Singh, <i>Magnus Wiktorsson</i> , Jannicke Bealund Hauge KTH Royal Institute of Technology, Sweden	Effect of process parameters on tensile properties of SS 316 prepared by directional energy deposition <i>Israt Zarin Eza</i> , Zhichao Liu West Virginia University, USA	Defect Detection System for Smartphone Front Camera Based on Improved Template Matching Algorithm Nengsheng Bao(a), <i>Yuchen Fan(a)</i> , Alessandro Simeone(c), Tuyen Lila(a), Zhongchao Luo(a) (a) Shanghai University, China (b) Politecnico di Torino, Italy (c) Friedrich-Alexander-University, Germany	Framework for simulation-based Trajectory Planning and Execution of Robots equipped with a Laser Scanner for Measurement and Inspection <i>Jan-Philipp Kaiser</i> , Sven Norbert Becker, Marco Wurster, Nicole Stricker, Gisela Lanza Karlsruhe Institute of Technology, Germany	3D printing to facilitate flexible sheet metal forming production <i>Fabio Tondini</i> , Ulfar Ansharumar, Alberto Basso, Chris Valentin Nielsen Technical University of Denmark, Denmark	The Application of Digital Worker Assistance Systems to Support Workers with Disabilities in Assembly Processes <i>Benedetto G. Maffei(a)</i> , Erwin Raach(b), Dominik T. Hamra(b) (a) Fraunhofer Institute of Production Technology, Germany (b) Fraunhofer Italia Research, Italy
5.40 pm - 5.45 pm	<b>Break and session change</b>					
5.45 pm - 6.00 pm	<b>Closing session</b> Zoom link: <a href="https://us02web.zoom.us/j/82592131457">https://us02web.zoom.us/j/82592131457</a>					