

Conference day I - November 1st 2021

08.30	Registration opening and coffee	
10.30	Conference warm-up Keynote by <i>Steffen Lundgaard Jørgensen, Ph.D., Senior Digitalization Manager - Supply Chain, Arla Foods (Denmark)</i> hosted by Associate Professor Kjeld Nielsen	9.00 - 11.15 - room TBD
11.30	Lunch	
12.30	Official welcome to conference by Associate Professor Kjeld Nielsen	
12.35	Aalborg University welcome by Rector Per Michael Johnsen	
12.50	"A Bibliometric and Sentiment Study of CARV and MCPC Conferences in the 21st Century: Towards Sustainable Customization" by Associate Professor Ann Louise Andersen	
13.15	Keynote "Adaptive Cognitive Manufacturing System (ACMS) - A New Paradigm" by Professor Hoda ElMaraghy from University of Windsor (Canada)	
14.05	Break	
14.15	Keynote by Simon Starbjerg, Ph.D., Director and Head of R&D Development in VESTAS (Denmark)	
14.45	Round table session	
15.15	Break	

Parallel Session 1							
Session subject	Changeable, Reconfigurable and Flexible Manufacturing (O-CRF1)	Smart Automation and Human-Machine Interaction (O-SA1)	Data-driven Approaches for Manufacturing and Variety Management (H-DDA1)	Digital Transformation (H-DT1)	Learning Factories and Engineering Education (H-LF1)	Smart Factories and Cyber-Physical Production Systems (H-SC1)	Industry Track (P-11)
Format	Online	Online	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid
Presentation 1	Manufacturing Genome: A foundation for symbolic, highly iterative product and production adaptations by Ferenc Farkas, Gábor Horváth, István János, Balázs Lőrincz, János Lőrincz, Gábor Lőrincz, Sándor Lőrincz	Aiming For Knowledge-Transfer: Optimizing Intelligent Cyber-Physical Systems by Marwan Ghannouchy, Clément Fournier, Frédéric Gosselin	Design Catalogues as Knowledge-Base for CAD-Based Design Automation by Marco Chiappini, Giancarlo	Industry 4.0 holds a great potential for manufacturers, so why haven't they started? A multiple case study of small and medium sized Danish manufacturers by Mads Steinhilber, Lene Steinhilber, Mads Steinhilber, Mads Steinhilber	Benefits of modularity strategies - Implications of decisions and timing by Paul Christoph Gombatz, Lukas Valters, Lukas Valters	Demonstrating and Evaluating the Digital Twin Based Virtual Factory for Virtual Prototyping by Sören Hilde, Christian Hilde, Axel Hilde	"Paperless Manufacturing at Terminals" by Roger Johansson, Roger Johansson - Paperless Manufacturing, Roger Johansson - Production Engineering at TSMC, Roger Johansson
Presentation 2	Advanced Reconfigurable Machine Tools for a New Manufacturing Business Model by Alessandro Brunzoni	Design of an intelligent robotic end effector based on Topology Optimization in the concept of Industry 4.0 by Dimitris Moutakassios, John Papadimitriou, Nikolaos Panagiotou	Agile Machine Development from Virtual to Real by Michael Keller, Michael Keller, Michael Keller, Michael Keller	Identifying production improvement opportunities enabled by digital innovation: The Digital Factory Mapping approach by Michael Keller, Michael Keller, Michael Keller, Michael Keller	Analysis of Industry 4.0 Capabilities: A Perspective of Educational Institutions and Needs of Industry by Holger Hees, Holger Hees, Holger Hees, Holger Hees	Applying Robotics Centered Digital Twins in a Smart Factory for Facilitating Integration and Improved Process Monitoring by Simon Mathiasen, Lars Carstensen, Anders Sørensen, Rolf Wiegand	"Fostering Insights and Improvements from real-time data among shop-floor workers" by Henrik Steiner, Manager, V&E/IT Operating System
Presentation 3	Design and fabrication of novel compliant mechanisms and origami structures for specialty grippers by Sara Strömberg	Feasibility of Augmented Reality in the scope of commission of industrial robot plants by Lukas Antonow, Lukas Antonow, Lukas Antonow, Lukas Antonow	Impact of Dough Property Characterization on Industrial Bread Production by Anne Sophie Schibye, Anne Sophie Schibye, Anne Sophie Schibye, Anne Sophie Schibye	Development of a human-centered implementation strategy for Industry 4.0 exemplified by Digital Shopfloor Management by Magnus Knudsen, Magnus Knudsen, Magnus Knudsen, Magnus Knudsen	Design Automation of a Motor Holding Crane - Results of Student Project on Knowledge-based CAD by Paul Christoph Gombatz, Lukas Valters, Lukas Valters	Digital Twin Design in Production by Sarah Wagner, Michael Müller, Michael Müller, Michael Müller	
Presentation 4	Configuration design of delayed reconfigurable manufacturing system(D-RMS) by Shih-Wei Shih, Hsiang-Hsiung, Szu-Yuan Wang, Tai-Yen	Assembly process digitization through self-learning assistance systems in production by Martin Anton Lorenzen, Romy Pöschel, Christopher May	A holistic Methodology for successive Bottleneck Analysis in Dynamic Value Streams of Manufacturing Companies by Michael Wenz, Michael Wenz, Michael Wenz, Michael Wenz	Implementing virtual prototyping for automated production of customized products: An SME case study by Lukas Christensen, Lukas Christensen, Lukas Christensen, Lukas Christensen	Considering Intelligent Tutoring Systems as Mass Customization of Digital Education by Paul Christoph Gombatz, Lukas Valters, Lukas Valters	Deconstructing Industry 4.0: Defining the Smart Factory by Christopher Schödl, Michael Müller, Michael Müller, Michael Müller	
Presentation 5	Classification of reconfigurability characteristics in supply chain by Sim Zou, Huihui Zhang, Lynn Korman	Detecting Faults during Automatic Screwdriving: A Dataset and Use Case of Anomaly Detection for Automatic Screwdriving by Wlodek Lopuszanski, Daniela Tosi, Cristian Horvath, Alexandru					
Presentation 6	A classification of the barriers in the implementation process of reconfigurability by Isabella Mognato, Ann Louise Anderson, Ottobiano Silvio, Luca	Integrated COBOT, Human, and Manufacturing Task Kinematic Chain by Yuxi Bi, Aili Qu, Jeremy Hight					

Parallel Session 2							
Session subject	Changeable, Reconfigurable and Flexible Manufacturing (O-CRF2)	Smart Factories and Cyber-Physical Production Systems (O-SC2)	Sustainable Manufacturing and Circular Economy (H-C1)	Factory and Shop Floor Planning (H-L1)	Additive Manufacturing (H-AM1)	Industry Track (P-12)	
Format	Online	Online	Hybrid	Hybrid	Hybrid	Hybrid	
Presentation 1	The use of principal component analysis for the construction of a reconfigurability index by Alexander Kopp, Alexander Kopp, Alexander Kopp, Alexander Kopp	A Requirement Engineering framework for Smart Cyber-physical production system by Yusef Yusef, Yusef Yusef, Yusef Yusef, Yusef Yusef	The phenomenon of local manufacturing: An attempt at a differentiation of Distributed, Re-Distributed and Urban Manufacturing by Peter Hesse, Peter Hesse, Peter Hesse, Peter Hesse	Understanding shared autonomy of collaborative human using motion capture system for simulating team assembly by Thomas Brügel, Thomas Brügel, Thomas Brügel, Thomas Brügel	A Reduced Gaussian Process Heat Emulator for Laser Powder Bed Fusion by Michael Li, Michael Li, Michael Li, Michael Li	Presentation by CEO Christian Eickstein from M&M network	
Presentation 2	Assessment of Repairability and Process Chain Configuration for Additive Repair by Marco Vignoli, Marco Vignoli, Marco Vignoli, Marco Vignoli	Framework for adoption of Freeform Injection Molding in discrete manufacturing companies by Peter Hesse, Peter Hesse, Peter Hesse, Peter Hesse	Sustainability Assessment of Manufacturing Systems - A Review-Based Systematic Approach by Peter Hesse, Peter Hesse, Peter Hesse, Peter Hesse	Dynamic task allocation for cooperating, heterogeneous assembly resources in LMAS by Peter Hesse, Peter Hesse, Peter Hesse, Peter Hesse	Additive manufacturing of TPU pneu-nets as soft robotic actuators by Peter Hesse, Peter Hesse, Peter Hesse, Peter Hesse		
Presentation 3	Incremental Manufacturing: Process planning for a scalable production by Ann-Kathrin Reiche, Benjamin Schumann, Klaus Dieder	Sustainability of factories in urban surroundings enabled by a space efficiency approach by Peter Hesse, Peter Hesse, Peter Hesse, Peter Hesse	Reverse Logistics for Improved Circularity in Mass Customization Supply Chains by Peter Hesse, Peter Hesse, Peter Hesse, Peter Hesse	Risk Assessment in Factory Planning Projects - An Empirical Evaluation of Industrial Practice by Peter Hesse, Peter Hesse, Peter Hesse, Peter Hesse	Applicability of snap joint design guidelines for additive manufacturing by Peter Hesse, Peter Hesse, Peter Hesse, Peter Hesse		
Presentation 4	Data-Driven Identification of Remaining Useful Life for Plastic Injection Moulds by Filip Bortnik, Filip Bortnik, Filip Bortnik, Filip Bortnik	An 'end to end' methodological framework to assist SMEs in the Industry 4.0 Journey from a sectoral perspective - An empirical study in the Oil & Gas Sector by Luciano Pires, Luciano Pires, Luciano Pires, Luciano Pires	Mass Customizing for Circular and Sharing Economies: A Resource-based View on outside of the Box Scenario by Peter Hesse, Peter Hesse, Peter Hesse, Peter Hesse	Approaches for Generating Synthetic Industrial Load Profiles in Greenfield Energy System Planning by Lukas Christensen, Lukas Christensen, Lukas Christensen, Lukas Christensen			
Presentation 5	Identification and Categorization of Assembly Information for Collaborative Product Realization by Silvio Schödl, Silvio Schödl, Silvio Schödl, Silvio Schödl	RAISE 4.0: A readiness assessment instrument aimed at raising SMEs to Industry 4.0 starting levels - An empirical field study by Marco Vignoli, Marco Vignoli, Marco Vignoli, Marco Vignoli					
Presentation 6	Balancing workers in divisional setups by Marco Vignoli, Marco Vignoli, Marco Vignoli, Marco Vignoli	A Framework for Industry 4.0 Implementation in Circular Economy Manufacturing Systems by Marco Vignoli, Marco Vignoli, Marco Vignoli, Marco Vignoli					

Parallel Session 3							
Session subject	Insights from Case Studies and Experiments (O-CSE1)	Smart Factories and Cyber-Physical Production Systems (O-SC3)	Changeable, Reconfigurable and Flexible Manufacturing (H-CRF3)	Smart Automation and Human-Machine Interaction (H-SA2)	Data-driven Approaches for Manufacturing and Variety Management (H-DVA2)	Industry Track (P-13)	
Format	Online	Online	Hybrid	Hybrid	Hybrid	Hybrid	
Presentation 1	Developing a Two-hour Design Thinking Workshop to Examine the Potential of Agri-Divers Co-Creation: Why Product Design Teams Should Invite Users Aged 50+, when Designing for the Demographic Change by Simen Schreier, Simen Schreier, Simen Schreier, Simen Schreier	A Concept for a Distributed Interchangeable Knowledge Base in CPS by Christof Tobi, Christof Tobi, Christof Tobi, Christof Tobi	A classification of different levels of flexibility in an automated manufacturing system and needed competence by Michael Wenz, Michael Wenz, Michael Wenz, Michael Wenz	Comparison of AI-based task planning approaches for simulating human-robot collaboration by Lukas Christensen, Lukas Christensen, Lukas Christensen, Lukas Christensen	Complexity Management in Engineer-To-Order Industry: a Design-Time Estimation Model for Engineering Processes by Sara Steiner, Sara Steiner, Sara Steiner, Sara Steiner	Presentation by CEO Henrik Høyer from Høyer (Hydr)	
Presentation 2	The Smart Suits Retailer: A case of Onward Personal Style Co by Sara Steiner	Generating Customer Insights Using the Digital Shadow of the Customer by Michael Wenz, Michael Wenz, Michael Wenz, Michael Wenz	Development of a parallel product production co-design for an agile battery cell production system by Michael Wenz, Michael Wenz, Michael Wenz, Michael Wenz	Towards Flexible PCB Assembly using Simulation-Based Optimization by Lukas Christensen, Lukas Christensen, Lukas Christensen, Lukas Christensen	Implicit and Explicit Modelling of Uncertainty in Early Design Stages of Product Design: a Comparative Study by Sara Steiner, Sara Steiner, Sara Steiner, Sara Steiner	"Movable Factories" - Video	
Presentation 3	Looking for Patterns: A Comparative Analysis of Mass Customization Co-Design Toolkits for Tangible versus Intangible Offerings by Frank B. Oetzel, Frank B. Oetzel, Frank B. Oetzel, Frank B. Oetzel	Development of a 3D platform for industrial imaging sensors by Christof Tobi, Christof Tobi, Christof Tobi, Christof Tobi	A Real Options Approach for NPV Investment Evaluation of Changeable Manufacturing Systems by Frank B. Oetzel, Frank B. Oetzel, Frank B. Oetzel, Frank B. Oetzel	Towards Automatic Welding Robot Programming Based on Product Model by Lukas Christensen, Lukas Christensen, Lukas Christensen, Lukas Christensen	Applying Modular Function Deployment for Non-assembled Products in the Process Industry by Sara Steiner, Sara Steiner, Sara Steiner, Sara Steiner		

15.00	<p>Presentation 4</p> <p>Improving the Patient Visit Process in the Pre-Treatment Phase by Sørensen (Lundbeck), Hansen, Søren (Novartis)</p> <p>Presentation 5</p> <p>Configuration Systems Applied to the Healthcare Sector for an Enhanced Prescription Process by Anne Campes Gay, Lars (Novartis)</p> <p>Presentation 6</p> <p>Parametric topology synthesis of a short-shaft hip endoprosthesis based on patient-specific osteology by Patrick Müller, Paul Cheng, Christoph Bräuer, Robert Lechner</p>	<p>Requirements analysis for digital shadows of production plant layouts by Julian Heilmann, Berndt von Lohning, Marek Flummet, Anton Bissler</p> <p>Application of multi-model databases in digital twins using the example of a quality assurance process by Julian Koch, Gerald Czogalla, Martin Grottel, Thorsten Schödlbauer</p> <p>Adaptive Manufacturing Based on Active Sampling for Multi-Component Individual Assembly by Alex Mouskountas, Gorka Lopez</p>	<p>Towards the Swarm Production Paradigm by Casper Schau, Mikko Anttila, Samer Sagha, Ole Meibohm</p>	<p>Towards a structured decision-making framework for automating cognitively demanding manufacturing tasks by Mathias van Torn, Peter Czerwinski, Tom Heister, Sören Assenbergh</p>	<p>Product Architecture Mining: Identifying Current Architectural Solutions by Mervin Slightfoot, Thomas Oliver Brunsak, Ann-Louise Andersson, Kjell Nilsson</p>		
End of parallel sessions							

15.30	Conference Dinner at Restaurant Fusion						
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Conference day II - November 2nd 2021

9.00	<p>Keynote</p> <p>"Don't believe the hype: how to translate digital innovation into tangible outcomes" by Michele Colli, Ph.D., Industrial IoT specialist at Force Technology (Denmark)</p>						
9.45	<p>Keynote</p> <p>"Agile Co-creation of Smart Factory Demonstrators" by Casper Schau, Assistant Professor, Aalborg University & External research partner at LEGO</p>				08.00 - 11.30	<p>Industry tour</p> <p>Aalborg Portland & Alfa Laval Shuttle bus from First Hotel Aalborg</p>	
10.45	<p>Keynote</p> <p>"Resource recovery through Take Back" by Christoffer Sjørgensen – Project Manager Environment CoE, Grundfos</p>						
11.30	Lunch						
12.30	<p>Keynote</p> <p>"How customization and personalization will become the key value driver" by Professor Frank Piller from RWTH Aachen University (Germany)</p>						
13.00	Break						

Parallel Session 4							
13.15	<p>Session subject</p> <p>Global Production and Supply Chain Networks (O-SCM1)</p>	<p>Learning Factories and Engineering Education (O-LF2)</p>	<p>Changeable, Reconfigurable and Flexible Manufacturing (H-CRF4)</p>	<p>Configuration Management and Choice Navigation (H-CM1)</p>	<p>Smart Products, Services and Product-Service Systems (H-PSS1)</p>	<p>Industry Track (P-I4)</p>	<p>Lab Session</p>
	<p>Format</p> <p>Online</p>	<p>Online</p>	<p>Hybrid</p>	<p>Hybrid</p>	<p>Hybrid</p>	<p>Hybrid</p>	<p>Physical</p>
	<p>Presentation 1</p> <p>Automated Production Network Planning under Uncertainty by Developing Representative Demand Scenarios by Olivier Brunet, Daniel Steinhilber, Vincent Dierckx, Nicolas Dierckx, Charles Lemaire</p>	<p>Human Capital Transformation for Successful Smart Manufacturing by Jessica Oliveira Aguiar, Wijngh C.M. van der Kamp, Hilde E.M. van der Kamp</p>	<p>Reconfigurable Manufacturing: An Investigation of Diagnosability Requirements, Enabling Technologies and Applications in Industry by Alberto Najdoski, Branka Stefanovic, Eloy Ariza Nasu, Ann-Louise Andersson</p>	<p>An Integrated Method for Knowledge Management in Product Configuration Projects by Christoph Ortlieb, Ingrid Weidemann</p>	<p>Leveraging the Value of Data in the Continuum of Products and Services: Business Types in the Function-Oriented Offering Model by Friedemann Mattern, Paul Christoph Dombrowski, Heiko Krcmar</p>	<p>"Leadtime reduction through digitalization of mechanical construction" by Andrew Farn, Head of Supply Chain & Engineering at Spraying Machine/Robo and team Mateo Serrano, PhD Fellow at German Machine/Robo and Aalborg University</p>	<p>MOVE2X, Lab Session 1</p> <p>A limited number of seats is available for this session, if you are interested, please go to the registration desk to sign up for this session (first come, first served)</p>
	<p>Presentation 2</p> <p>Automated Model Development for the Simulation of Global Production Networks by Michael Meiss, Günther Faustner</p>	<p>State of the Art of European Learning Factories for the Digital Transformation - A Survey on Technologies, Learning Concepts and their Performance by Grit Rahm, Marc Grottel</p>	<p>Methods and Models to Evaluate the Investment of Reconfigurable Manufacturing Systems: Literature Review and Research Directions by Stefan Klingauf, Ann-Louise Andersson, Thomas Oliver Brunsak, Kjell Nilsson</p>	<p>Enabling Mass Customization Life Cycle Assessment in Product Configurators by Norimichi Chikahara, Robin Wübbeler</p>	<p>Next best coherent experience by Erik Kayser, Andrew Hughes, Harald Berg of Carmin, Linnaeus Partner</p>	<p>"The REKON project" by Prof. Thomas Oliver Brunsak, Aalborg University</p>	
	<p>Presentation 3</p> <p>Exploring the requirements and challenges in production logistics for different sectors of the manufacturing industry by Ali Boudar, Benoit Wemmer, Isabelle Ruyer, Robert Scholz</p>	<p>A Learning Factory for teaching the transition from conventional to industry 4.0 based systems by Ingrid Klingauf, Christa Preuss, Lisa Felber-Pugliese, Anja Seifried, Ann-Louise Andersson</p>	<p>Long-term production development: an industry perspective by Stefan Jöbstl, Stefan Grottel, Grottel Grottel</p>	<p>Measuring User Experience Related Data of Online Product Configurators by Paul Bissler, Georg Dierckx</p>	<p>Framing Development Methodologies for Product-Service Systems by Paul Christoph Dombrowski, Friedemann Mattern</p>	<p>Presentation</p> <p>by Mich Lerner - from Aalto</p>	
	<p>Presentation 4</p> <p>Industry 4.0: The case-study of a Global Supply Chain Company by Casper Schau, Professor de Mads</p>	<p>A Framework for Manufacturing Innovation Management and the Integration of Learning Factories by Guisela Gómez, Benedek G. Mész</p>	<p>Exploring a Data-augmented Approach for Improved Module Driver Analysis by Robert Andersson, Thomas Oliver Brunsak, Kjell Nilsson</p>	<p>Creating Customizable Co-Innovation Spaces by Paul Bissler, Werner Assenbergh</p>			
	<p>Presentation 5</p> <p>Concept for a token-based blockchain architecture for mapping manufacturing processes of products with changeable configurations by Fabian Dietrich, Louis Loew, Daniel Pahn</p>	<p>Project and engineering management in the era of Industry 4.0 – an overview of learning requirements by Khoudir Moudi, Ingrid van den Brink, Stefan Wemmer</p>					
	<p>Presentation 6</p> <p>Fostering the diffusion of Intelligent Transport Systems (ITS) in intermodal logistics in Italy by Marco Lucifora, Luca Forster</p>	<p>Blockchain as a Sustainable Service-enabler: A Case of Wind Turbine Traceability by Ingrid</p>					
14.15	Break						

Parallel Session 5							
14.30	<p>Session subject</p> <p>Data-driven Approaches for Manufacturing and Variety Management (O-DDA3)</p>	<p>Digital Transformation (H-DT2)</p>	<p>Machine Learning for Smart Manufacturing (H-ML1)</p>	<p>Smart Automation and Human-Machine Interaction (H-SA3)</p>	<p>Insights from Case Studies and Experiments (H-CSE2)</p>	<p>Industry Track (P-I5)</p>	<p>Lab Session</p>
	<p>Online</p>	<p>Hybrid</p>	<p>Hybrid</p>	<p>Hybrid</p>	<p>Hybrid</p>	<p>Hybrid</p>	<p>Physical</p>
	<p>Presentation 1</p> <p>Machine Vision: Error detection and classification of tailored textiles using neural networks by Kai Müller, Christoph Gahr</p>	<p>Exploring simulation as a tool for evaluation of automation assisted assembly of customized products by Sagar Rao, Madhukar, Karan Johansen</p>	<p>Weld Seam Trajectory Planning Using Generative Adversarial Networks by Michael Koll, Alexander Baumgartner, Christian Stöckl, Michael Job</p>	<p>A case study of Plug and Produce Robot Assistants for Hybrid manufacturing workstations by Sebastian Hirth, Casper Schau, Filip Ribeiro de Sá, Finn Trappmann, Michael Grottel, Werner Assenbergh</p>	<p>Knowledge Integration in Industrialized house building – current practice and challenges by Daniel Hauns, Michael Dietzen, Parvaneh Witzel</p>	<p>Presentation</p> <p>by Rasmus Andersen, Nils Henrik, Aalborg University</p>	<p>MOVE2X, Lab Session 2</p> <p>A limited number of seats is available for this session, if you are interested, please go to the registration desk to sign up for this session (first come, first served)</p>
	<p>Presentation 2</p> <p>Similarity-based Process and Set-up Time Estimation by Berndt Dierckx, Marc-André Dierckx, Simon Johannes Setzl</p>	<p>The Effect of Digital Maturity on Strategic Approaches to Digital Transformation by Günther Faustner, Marco Schmitt, Marco Steinhilber, Christoph Ortlieb</p>	<p>A New Authentic Cloud Dataset from a Production Facility for Anomaly Detection by Emil Bril, Henrik, Emil Schödlbauer von der Burg, Mirko Busch, Michael, Michael Bergauer, Benjamin, Simon Witzel, Philipp, Ann-Louise Andersson, Nadim El-Hachimi, Simon Singh</p>	<p>Enabling Resilient Production through Adaptive Human-Machine Task Sharing by Deepak Chughani, Anil Hasnabadi, Christian Schmittauer, Richard Töpel, Stefan Wübbeler</p>	<p>Implementing Machine Learning in Small and Medium-sized Manufacturing Enterprises by Heiko Wübbeler and Finn Christian Heusinger</p>	<p>Presentation</p> <p>by Jürgen Schilling, Larsen, Ph.D., CEO of PCM technology</p>	
	<p>Presentation 3</p> <p>A Data-driven Approach for Option-specific Order Freeze Points in Mass-customized Production by Simon Ditz, Sören Zillmann, Hannah Bernth, Gwendolyn Steiner, Michael F. Heider, Grottel Grottel</p>	<p>Constraints for motion generation in work planning with digital human simulations by Michael Janetzki, Tobias Bärny, Turk, Martin Möhrli</p>	<p>Framework for potential analysis by approximating line size assembly systems with AutoML by Lara Gruber, Jonas Richter, Anni-Gabriel, Sören Sauer, Robert Schmidt</p>	<p>Virtual modeling as a safety assessment tool for a collaborative robot (cobot) work cell based on ISO/TS 15066:2016 by mohsen razi, Ali Ahmad Akbari, Arne Billberg</p>	<p>Human-centred Design and Co-Design Methodologies for Mass Customization in Housing: A Case Study using Cloud Computing Applications by Miguel Mota, Ingrid Grottel, Juan Lago-Rodrigo</p>		
	<p>Presentation 4</p> <p>Tools for the Variety-oriented Product-Service System Design by Christoph Rumpel, Julian Koll, Dieter Krause</p>	<p>Teaching Old Dogs New Tricks - Towards a digital transformation strategy at the Shop Floor Management level: A case study from the Renewable Energy Industry by Feritelle Clausen, Benjamin Hentzen</p>	<p>Clustered Problems and ML Methodologies: A New Approach by Daniel Diaz, Lari Vahmani, Erik Berger</p>				
	<p>Presentation 5</p> <p>Characteristic-Oriented Complexity Cost Analysis for Evaluating Individual Product by Julian Koll, Christoph Rumpel, Dieter Krause</p>						
	<p>Presentation 6</p> <p>Going Above & Beyond eCommerce in the Future Highly Virtualized World and Increasingly Digital Ecosystem by Jean-Philippe Harrison-Bouchard, Jocelyn Delisle</p>						
15.30	Break						
16.00	Closing ceremony						
16.45	Farewell party						