



Wednesday, 18.06.2025		
Time slot	AULA Magna	
8.30-10.00	Registration	
10.00-10.30	Welcome and Opening	
10.30-11.30	Keynote 1: Prof. Mélanie Despeisse, Chalmers University of Technology	
11.30-12.30	Industrial Keynote : Dipl. Ing. Florian Baumgartner, Director Process Planning at alpitronic	
12.30-14.00	LUNCH	
Time slot	Room 2	Room 3
	Production and Supply Chain Management - 1	Industrial Engineering and Management - 1
14.00-14.15	161 The strategic role of Industry 4.0 for SME International Competitiveness. Romanello, Rubina; Veglio, Valerio; Chiarvesio, Maria	152 AI-ML based models: The Path to Optimal Workload Management and Safety Assurance. Pereira, Eduarda; Costa, Nélson; Costa, Nuno; Sampaio, Adriana
14.15-14.30	157 System architecture for enhancing Resiliency in Cyber-Physical Production Systems. Barrero Arciniegas, Humberto Alejandro; Bataleblu, Ali Asghar; Don, Davide; Rauch, Erwin; Matt, Dominik T.	151 AI vs. human performance in university assessments: a case study in production management. Fantozzi, Italo Cesidio; Martuscelli, Luca; Schiraldi, Massimiliano M.
14.30-14.45	153 Development of a Conceptional Framework for Circular Economy Collaborations in the Manufacturing Industry. Emir, Merve; Fottner, Johannes	146 Enhancing Safety in the Iron and Steel Industry through Artificial Intelligence. Cocca, Paola; Guarascio, Massimo; Pisani, Francesco Sergio; Tomasoni, Giuseppe; Valente, Bernardo; Zorzi, Martina
14.45-15.00	134 Advancing sustainability in manufacturing: The role of Industry 4.0 technologies. Molinaro, Margherita; Hmouda, Ahmed Mohamed Omar; Sartor, Marco; Orzes, Guido	140 Industrial metaverse for smart manufacturing: Live data visualization with OPC UA and AAS. Brandt, Nico; Ajdinović, Samed; Littfinski, Daniel; Maisch, Nicolai; Díaz, Alberto Sancho; Lechler, Armin; Riedel, Oliver
15.00-15.15	133 The impact of mountain location on supply chain structure decisions. Molinaro, Margherita; Teshome, Mehari Beyene; Podrecca, Matteo	139 Modularity in manufacturing: Investigating its influence on manufacturing lead time and efficiency. Nazarejova, Julia; Soltysova, Zuzana; Modrak, Vladimir
15.15-15.45	Coffee Break	
16.00-18.00	Lab tours: - Smart Mini Factory - Extended Reality Lab - Prototyping Lab - Characterization Lab - Fraunhofer ARENA	
18.00-20.00	Standing dinner	



Thursday, 19.06.2025			
Time slot	AULA Magna	Room 2	Room 3
	EPIEM – 18th EPIEM Conference - 1	Production and Supply Chain Management - 2	Industrial Engineering and Management - 2
9.00-9.15	Welcome EPIEM by local Chairs and EPIEM President	129 A novel method for accounting Scope 3 Carbon Emissions at a Supply Chain level. Lombardi, Giorgio ; Bressanelli, Gianmarco; Saccani, Nicola; Settembre Blundo, Davide	113 The impact of top and middle management commitment to Occupational Safety and Health on Corporate Social Responsibility in mining industry. Spasojević Brkić, Vesna Konstantin ; Petrović, Nikola Vladimir; Mihajlović, Ivan Nenad; Janev, Nemanja Nenad; Papić, Neda Ljubiša; Zunk, Bernd Markus
9.15-9.30	124 Assessing sustainability in subregional industrial value chains: Opportunities and challenges. Retegi, Jabier ; Igartua, Juan Ignacio; Ibarra, Dorleta; Eguren, José Alberto	126 Supply chain resistance: a framework integrating resilience and robustness. de Simas, Davi ; Alvim, Silvio Luiz; Morosini Frazzon, Enzo; Taboada Rodriguez, Carlos Manoel; Ribeiro da Silva, Elias	166 Managing and mitigating cognitive biases in product design: Insights from the literature. Tiruneh, Muluken Abebe ; Suzic, Nikola; Turner, Frances
9.30-9.45	127 Clustering Thailand's industry based on supply chain performance: a sustainable and resilience approach. Watanabe, Woramol Chaowarat ; Patitad, Patchanee; Ransikarbum, Kasin; Janmontree, Jettarat	123 Scope 3 emissions assessment in European automotive value chains. Retegi, Jabier ; Igartua, Juan Ignacio; Ibarra, Dorleta; Arregi, Ane	170 AI-driven remote expert system architecture approach: an integration of AI, MR, and NLP. Kongon, Bhusana; Jantarakongkul, Benchaporn; Kanangnanon, Tanat; Jitngernmadan, Prajaks
9.45-10.00	144 Corporate sustainability reporting in energy-flexible production systems. Sambale, Simon; Wörle, Markus; Geier, Jan ; Zaeh, Michael F.	120 Sustaining Quality in Production: Workers and Quality interactions. Das, Ajay	171 Indirect workforce planning tool. Teixeira, Diogo; Pimentel, Carina
10.00-10.15	148 Sustainability performance monitoring and reporting: a global comparison, gaps and emerging solutions. Emer, Asja ; Sandforth, Guido; Rauch, Erwin; Matt, Dominik	119 Criteria development for hydrogen fuel cell supplier selection using the Bayesian best-worst method. Janmontree, Jettarat ; Shinde, Aditya; Ransikarbum, Kasin; Zadek, Hartmut	174 Quantifying performance in AR-based industrial maintenance application: a framework for activity data analysis. Kankam, Suphawit; Fongsamut, Chalermpan; Khunnen, Methasit ; Kubola, Kanuengnij; Jitngernmadan, Prajaks
10.30-11.00	Coffee Break		



	EPIEM – 18th EPIEM Conference - 2	Production and Supply Chain Management - 3	Engineering Education 5.0
11.00-11.15	156 The influence of manufacturing and innovation strategies in driving automotive sector market trends. Bataleblu, Ali Asghar ; Esmaeilian, Maryam; Rauch, Erwin; Cochran, David S.	115 A comprehensive survey on resilience influencing factors in manufacturing companies. Stang, Julian ; Bernhard, Olivia; Zaeh, Michael F.; Reuter, Christina	105 Leveraging a generative artificial intelligence tool to aid engineering research and education in a non-English-speaking country. Katongtung, Tossapon; Tippayawong, Nakorn ; Tippayawong, Korrakot Yaibuathet; Woschank, Manuel
11.15-11.30	158 Challenges for implementation of digital transformation across industries. Argilovski, Aleksandar ; Jovanoski, Bojan; Minovski, Robert	110 Capturing the Paradigms of Future-Proof Production Systems – Unified Modeling of Lean, Digitalization, and Sustainability. Bernhard, Olivia; Schirling, Daniel; Stang, Julian ; Zaeh, Michael	106 Self-Assessment Biases in Spreadsheet Programming among STEM Students. Máté, Domicián ; Csernoch, Mária
11.30-11.45	173 Sustainable Shop Floor Management: An exploratory narrative literature review. Pimentel, Carina ; Calcado, Rodrigo; Matias, João; Zunk, Bernd Markus	104 Towards changeable production logistics: a framework for analyzing logistic factors and their interactions. Vollmuth, Pia Caroline ; Weidinger, Jacqueline; Fottner, Johannes	108 Lean Digital Education. Csernoch, Maria
11.45-12.00	Closing remarks and announcement of next EPIEM conference	101 Sustainability-Based Barriers Assessment for Hydrogen Fuel in Logistics from an Industrial Perspective. Ransikarbum, Kasin ; Niemsakul, Jirawan; Hiranmahapol, Surat; Janmontree, Jettarat; Zadek, Hartmut	145 Progress roadmap and information hub for purdue university fort wayne student success. Konatham, Anuradha ; Gaddam, Vedhan Reddy; Cochran, David S.
12.00-12.15		100 Environmental hotspots for sustainability in additive manufacturing: insights from expert interviews. Ördek, Baris ; Borgianni, Yuri; Spreafico, Christian	
12.30-14.00	Lunch		



14.00-15.00	AULA MAGNA Keynote 2: Prof. Andrea Trianni University of Technology Sydney	
Time slot	Room 2	Room 3
	SME 5.0 – Introducing Industry 5.0 in SMEs - 1	Human-centric Manufacturing and Collaborative Automation - 1
15.00-15.15	114 Customer Success Management as a Driver for Sustainability: Insights from a Case Study in the Steel Manufacturing Industry. Seidenstricker, Sven; Kriebel, Sebastian ; Fischer, Heiko; Bank, Maximilian	112 Catching adaptive patterns: from the theory of graceful extensibility to empirical findings in a simulated environment. Bernabei, Margherita ; Patriarca, Riccardo
15.15-15.30	136 Asian engineering competence survey (AECS): The impact of competence on performance of asian industrial engineering and management alumni. Woschank, Manuel; Pacher, Corina ; Olipp, Nadine; Zunk, Bernd M.; Tippayawong, Korrakot Y.; Fongsamootr, Prim	122 Human-Robot Collaboration: Worker Utilization and its Impact on Worker Well-Being. Javernik, Aljaz ; Buchmeister, Borut; Ojstersek, Robert
15.30-15.45	132 Engineering education 5.0: specific work 5.0 competence-based requirements for smart and sustainable operations management. Zare, Leila ; Rauch, Erwin; Matt, Dominik	125 The use of novel solutions and Human-Machine interaction in case of fire incidents on containerships. Sangermano, Vittorio ; Pistella, Alessandro; Russo, Francesco; Palma Esposito, Daniele; Duca, Gabriella
15.45-16.00	135 The impact of circular economy practices on business performance in manufacturing enterprises: A preliminary research study. Olipp, Nadine; Woschank, Manuel	130 A Human-Centric AutomationML framework for adaptive UX-driven automation. Khamaisi, Riccardo Karim; Valentini, Lorenzo; Borghi, Simone; De Ciantis, Rocco; Grandi, Fabio ; Peruzzini, Margherita
16.00-16.15	177 Reengineering for Industries 4.0 and 5.0 with Suh's Axiomatic Design. Brown, Christopher A. ; Meinhold, Lauren	141 Development of a Web and Mobile Application for Control and Management of a Pneumatic Rehabilitation Glove. Rahimic, Senad ; Hadzic, Ermin; Dedic, Amila; Smajic, Azra
16.15-16.45	Coffee Break	



	SME 5.0 – Introducing Industry 5.0 in SMEs - 2	Human-centric Manufacturing and Collaborative Automation - 2
16.45-17.00	137 From reacting to pandemic to broad-based proactive preparedness: ambitions and shifting needs in manufacturing SMEs. Birkie, Seyoum Eshetu ; Hauge, Jannicke Baalsrud; Tulardilok, Tulaya	147 Risk assessment in manual load handling: application of a technical guide and digital simulation. Ruiz de la Torre Acha, Aitor; Alzola Bernardo, Jon ; Rio Belver, Rosa Maria; Fernández Alvarez, Álvaro
17.00-17.15	138 Inclusiveness of Workers in Manufacturing – Recommendations for Action for SMEs. Haid, Charlotte ; Metzner, Annina; Fottner, Johannes	160 Leveraging Large Language Models for efficient assembly task support in multilingual manufacturing environments. Siddiqui, Md Khalid ; Engel, Tobias
17.15-17.30	150 Exploring the current Status of Circular Economy and Best Practices in South Tyrol. Jakobs, Lars ; Kargruber, Johanna; Rauch, Erwin; Matt, Dominik	167 Cobottwin: a fiware-based digital twinning solution for collaborative robots. Amorim, Vitor ; Cruz, António; Lopes, Sérgio
17.30-17.45		172 Neuroergonomics in Cognitive Load and Decision-Making in Industry 5.0. Andreau, J. Mario ; Salimbeni, Sergio
17.45-18.00		176 Experimental evaluation of sensor redundancy and filtering for human tracking in industrial collaborative applications. Mallavarapu, Rabert Rajesh ; Manzardo, Matteo; Gualtieri, Luca; Yan, Yicheng; Huesing, Mathias; Corves, Burkhard; Vidoni, Renato
19.30-23.00	Gala Dinner at Castel Maretsch (old city of Bolzano)	



Friday, 20.06.2025		
	Room 2	Room 3
	Advances of Digital Twins - 1	Automation and Manufacturing Technologies
9.00-9.15	111 Digital twins as enablers for supply chain integration: connecting multiple locations of smart factories. Cenk, Gökhan ; Andersson, Jonas; Engel, Tobias	107 Process automation using offline programming of industrial robots. Goyal, Akshay ; Faruk Acar, Ömer; Erlandsson, Gustav; Aslanidou, Ioanna
9.15-9.30	149 A semi-empirical ground interaction tool for tracked heavy-duty vehicles. Secades Rodríguez, Alejandro ; Fellin, Wolfgang; Ferdik, Manuel	109 3D printing in the construction sector: identification of key topics, technologies, applications and relevant factors discussed in the literature. Öztürk, Ece ; Borgianni, Yuri; Ince, Ceren
9.30-9.45	154 Human-machine-interface for machine remote control. Hismatov, Mansur ; Hubbert, Frank; Engel, Tobias	117 Driveline Concept Generation and Optimization for positioning Machines. Verschueren, Andreas ; Roelfs, Martin; Houwen, Simon; Haemers, Michiel; Maes, Brecht; Vanwalleggem, Bart; Stockman, Kurt; Derammelaere, Stijn
9.45-10.00	155 Optimization of manufacturing parameters using digital twin simulation. Kanangnanon, Tanat; Fongsamut, Chalermpan; Kongon, Bhusana; Jitngernmadan, Prajaks	118 Contact force estimation in industrial robot joints using moving-horizon-estimation. Kamm, Valentin ; Lehner, Jannik; Bauer, Christian J. E.; Lechler, Armin; Verl, Alexander
10.00-10.15	162 A FIWARE-based digital twin for the textile & clothing sector: The Adalberto use case. Quesado, Gonçalo ; Cruz, António; Pedroso, João; Lopes, Sérgio	128 Wait-free concurrent data access for real-time systems. Fischer, Marc ; Walker, Moritz; Neumann, Rebekka; Lechler, Armin; Verl, Alexander
10.15-10.30		159 An Engineering Education 5.0 Holistic Environment with EPR and AI. Manopiniwes, Wapee ; Chernbumroong, Sainatee; Tutko, Martin
10.30-11.00	Coffee Break	



	Advances of Digital Twins - 2	Mechanical Engineering and Design
11.00-11.15	164 The concept of a digital twin of an autonomous mobile robot. Natmeladze, Nino; Pitel, Ján ; Židek, Kamil; Romaniuk, Vitalii; Bonello, Amberlynn	116 Fatigue characterization of L-PBF AlSi10Mg alloy for fastener-free aeronautic joints. De Pasquale, Giorgio ; Margaria, Luca; Coluccia, Antonio
11.15-11.30	165 Addressing challenges in cobot integration: using discrete event simulation models to redesign multistage manufacturing flow lines. Felder, Manuel ; Onay, Anita; Hagendorfer, Elias; Plunger, Simon; Rauch, Erwin	142 Beyond conventional design: Enhancing the reliability of pouch sorter systems with multi-body simulation. Kröpfl, Patrick ; Ortner-Pichler, Alexander; Landschützer, Christian
11.30-11.45	168 A FIWARE-based digital twin for the textile sector: the MTEX NS use case. Lemos, Tiago Fernandes ; Severino, Ricardo; Cruz, António Miguel; Teixeira, Patrício; Lopes, Sérgio Ivan	143 Design of a 2-DOFs gripper mechanism with linear actuation. Boscariol, Paolo ; Fontana, Matteo; Tamellin, Iacopo
11.45-12.00	169 Towards a digital-twin driven laser welding. Gbagba, Sadiq Omobowale ; Concli, Franco	163 Structural performance of novel 3D-printed multilayer composite sandwich structures with bio-inspired cellular architectures. Taghizadeh, Seyedahmad ; Cheng, Liangliang; Macconi, Lorenzo; Concli, Franco
12.00-12.15	121 Industry 5.0 in EU and ASEAN: A Comparative Analysis of Intelligent, Sustainable, and Human-Centered Manufacturing Readiness. Jangkrajarn, Varattaya ; Ramingwong, Sakgasem; Tipayawong, Korrakot Y.; Santiteerakul, Salinee; Jintana, Jutamat	175 Evaluation of Deviations in a Generative Designed Component Fabricated via Additive Manufacturing. Dianda, Angelica ; Maccioni, Lorenzo; Borgianni, Yuri
12.15-13.00	AULA MAGNA Best Paper Award and Closing Ceremony	