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Record Nr.	UNINA9911046545703321
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Titolo	Advances in Production Management Systems. Cyber-Physical-Human Production Systems: Human-AI Collaboration and Beyond : 44th IFIP WG 5.7 International Conference, APMS 2025, Kamakura, Japan, August 31 - September 4, 2025, Proceedings, Part VI / / edited by Hajime Mizuyama, Eiji Morinaga, Tomomi Nonaka, Toshiya Kaihara, Gregor von Cieminski, David Romero
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2026
ISBN	3-032-03550-3
Edizione	[1st ed. 2026.]
Descrizione fisica	1 online resource (797 pages)
Collana	IFIP Advances in Information and Communication Technology, , 1868-422X ; ; 769
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Disciplina	621.39 004.6
Soggetti	Computer engineering Computer networks Computer Engineering and Networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	-- Digital Services and Smart Product-Service Systems. -- Literature-Based Analysis of Opportunities for Data-Driven Product Development. -- Development of an Interactive decision support system for part selection in additive manufacturing. -- Towards a Framework for Value-based Pricing of Digital Products in the Manufacturing Industry. -- Digital transformation in mechanical engineering - Digital Twins in Virtual Commissioning. A use case in a German small and medium-size company. -- Innovative Approaches and Methods for Developing Industry 4.0 and Industry 5.0 Skills. -- The Role of Digital Training Platforms in Facilitating the Sustainability Transitions of European SMEs: Insights from the EU-Funded Project "STAGE". -- Use of

Generative AI for Assessing Experiential Learning in Engineering Education. -- The Importance of Skills for Society 5.0. -- Designing Practical Learning Activities for Industry 4.0 and 5.0: A Case Study in a Learning Factory. -- Guidelines for Designing Engineering Education in the Context of Industry 4.0 and 5.0. -- Scheduling and Production Planning in Smart Manufacturing. -- A Study on Integrated Production Management for Engineer-to-order Production: An Integer Programming Formulation for Flexible Medium-term Production Planning. -- Towards a Methodology for ML-based Decision-Making in Production Planning for Machinery and Plant Engineering. -- Transformer-Based Approach for Fitness Prediction in the Flexible Job Shop Scheduling Problem. -- Multi-Objective Production Planning of Block Allocation in Shipyard Blasting Operations. -- Field-Based Assessment of Key Influence Factors for Throughput Time Prediction in Job Shop Manufacturing. -- Investigating Cloud-Edge-Fog Computing Configuration for Roboti. -- Resilient workforce planning for MMALs with training and learning effects. -- Supply Network Planning and Optimization. -- Modelling of Logistics Objectives at the Sea Side of Container Terminals. -- RAPID Intermodal Transport System: A New Concept for Joint Transportation of Passengers and Freight. -- Inventory Allocation for Leasing and Sales Demands. -- RUBI: Relative-Urgency Based Initialization for solving Job Shop Scheduling Problem. -- Constraint Programming-based Optimization Algorithm for International Voyage Planning Considering Barge Loading Space Allocation. -- Artificial Intelligence / Machine Learning in Manufacturing. -- AI estimated Assembly Time Forecasting for Engineering-to-Order Manufacturing - Use Case Study on Production Planning of Machine Tools. -- Automated Footwear Surface Inspection System Based on the Deep Learning Object Detection. -- Exploring Zero-Shot Data Drift Detection with Large Language Models. -- Machine Learning Lifecycle Explorer: Leverage the lifecycle metadata (onto) logically. -- Bridging Traditional and Digital Quality Control: Mobile AI Inspection with YOLOv8. -- Design-on-Graph: A graph retrieval-augmented generation-based method to support manufacturing system design. -- An Ontological Perspective on the Biomanufacturing Process Design. -- Reinforcement Learning-Based Algorithm for Optimizing Marking Sequences in Nesting Drawings. -- Cloud and Collaborative Technologies. -- Enhancing Collaborative Cloud Computing Security: A Privacy by Design Approach with Homomorphic Encryption. -- Approaching Quality Management in Production Networks of Micro and Small Enterprises – Implications of Current Literature. -- Optimising a Manufacturing-as-a-Service platform through mathematical modelling. -- From Code to Production: A Quantitative Analysis of SaaS Characteristics for MaaS Development. -- Simulation of Production and Supply Chains. -- A Dynamic Milling Power Model Considering Tool Wear and Material Hardness with Simulated Applications. -- Scenario-Based Simulation for Developing New Production Systems: A Methodological Framework.

Sommario/riassunto	The six-volume set IFIP AICT 764-769 constitutes the refereed proceedings of the 44th IFIP WG 5.7 International Conference on Advances in Production Management Systems, APMS 2025, held in Kamakura, Japan, from August 31st to September 4th, 2025. The 227 full papers presented in these proceedings were carefully reviewed and selected from 247 submissions, which cover a broad array of research and technological developments on the present and future of "Cyber-Physical-HUMAN Production Systems". They were categorized under the following topical sections: Part I: Human-centred Work Systems for the Operator 4.0/5.0 in Manufacturing, Logistics, and Service Domains; AI-

Driven Decision Support and Human-AI Collaboration for Smart and Sustainable Supply Chains; Digital Twins and AI for Dynamic Scheduling and Human-Centric Applications. Part II: Smart Manufacturing Evolution: Integrating AI and the Digital Twin for Human-centric, Circular and Collaborative Production Systems; Human-centered Service Engineering and Digital Transformation for Sustainable Service Industries; Shaping Human Capital for Industry 5.0: Skills, Knowledge and Technologies for Human-centric, Resilient, and Sustainable Manufacturing; Experiential Learning in Engineering Education; Theoretical and Practical Advances in Human-centric, Resilient, and Sustainable Supply Chain Management; Maintenance and Asset Lifecycle Management for Sustainable and Human-centered Production; Methods and Tools for Assessing the Value of Digital, Sustainable and Servitized Offerings of Manufacturing Companies. Part III: Digital Transformation Approaches in Production and Management; Digital Technologies in Manufacturing and Logistics: Exploring Digital Twin, IoT, and Additive Manufacturing; Enhancing the Value Creation Mechanisms of Manufacturing Value Chains through Digital Platforms, Circular strategies, and Servitization Principles. Part IV: Enhancing Value Chain Resilience through Digital Technologies; How Supply Chain Can React to Internal and External Disruptions?; Mechanism Design for Production, Service and Supply Chain Management; Transforming Engineer-to-Order Projects, Supply Chains, and Systems; Designing Next Generation Lean Models Supporting Social, Sustainable, and Smart Production Systems. Part V: Advancing Eco-efficient and Circular Industrial Practices; Upgrade Circular Economy for the Manufacturing Industry; Cyber-Physical System-Based Approaches to Achieve Sustainability; Industrial Data Spaces and Sustainability; Enabling Circularity in Batteries & E-Waste with Digital Technologies: From Production to Recycling; Circular and Green Manufacturing; Sustainable Product Design and Engineering. Part VI: Digital Services and Smart Product-Service Systems; Innovative Approaches and Methods for Developing Industry 4.0 and Industry 5.0 Skills; Scheduling and Production Planning in Smart Manufacturing; Supply Network Planning and Optimization; Artificial Intelligence / Machine Learning in Manufacturing; Cloud and Collaborative Technologies; Simulation of Production and Supply Chains.