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Digital and Collaborative Systems for Innovative Manufacturing



In today's rapidly evolving industrial landscape, businesses must innovate to meet customer needs and achieve organizational goals. Digital and Collaborative Systems for Innovative Manufacturing explores the vital role of digitalization and collaboration in manufacturing, presenting the latest research on technologies that drive innovative systems. It emphasizes the integration of cutting-edge tools, connectivity, and collaborative practices to enhance productivity and efficiency. Structured in two sections, the first part covers the principles of digital and collaborative systems, focusing on key concepts and trends that facilitate manufacturing innovation. The second part delves into designing and managing collaborative manufacturing ecosystems, highlighting supply chain integration, digital collaboration platforms, and human–robot cooperation. Featuring case studies and best practices from various industries worldwide, this book offers practical insights into the current state of digital manufacturing. Key themes include digital transformation, sustainability, collaborative ecosystems, and emerging business models. Intended for scientists, engineers, academics, manufacturing service providers, and technical management professionals, this comprehensive guide is essential for navigating the challenges and opportunities of Industry 4.0 and 5.0 in a competitive digital age.

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