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Sommario/riassunto

This is an open access book. It gathers the first volume of the proceedings of the 31st edition of the International Conference on Flexible Automation and Intelligent Manufacturing, FAIM 2022, held on June 19 – 23, 2022, in Detroit, Michigan, USA. Covering four thematic areas including Manufacturing Processes, Machine Tools, Manufacturing Systems, and Enabling Technologies, it reports on advanced manufacturing processes, and innovative materials for 3D printing, applications of machine learning, artificial intelligence and mixed reality in various production sectors, as well as important issues in human-robot collaboration, including methods for improving safety. Contributions also cover strategies to improve quality control, supply chain management and training in the manufacturing industry, and methods supporting circular supply chain and sustainable manufacturing. All in all, this book provides academicians, engineers and professionals with extensive information on both scientific and industrial advances in the converging fields of manufacturing, production, and automation.