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Sommario/riassunto	This book reports on innovations and engineering achievements of industrial relevance, with a special emphasis on developments in mechatronics, control engineering and signal processing. It gathers peer-reviewed papers presented at the 3rd International Conference "Innovation in Engineering", ICIE 2024, held on June 26-28, 2024, in Povoação, São Miguel Island, Azores, Portugal. It covers advances in automated detection and monitoring systems, industrial applications of machine learning and artificial neural networks, and industrial robots, among other topics. This second volume of a three-volume set, provides engineering researchers and professionals with a timely snapshot of technologies and strategies that should help improve production efficiency, industrial sustainability, and human well-being. .