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Nota di contenuto	Petri Nets in Discrete-Event and Hybrid Systems Modelling, Analysing, Performance Evaluation and Control -- The PLC Implementation of Fractional-Order Operator Using CFE Approximation -- Descriptor Positive Nonlinear Systems -- Descriptor Fractional Continuous-Time Linear System and its Solution – Comparison of Three Different Methods -- Synthesis of Optimal Robust Regulator for Food Processing Facilities -- Development of Electronic Controller for Haptic Joystick and Electrohydraulic Drive -- Initial Comparison of Experimental vs. Simulation Results of Velocity Fractional-Order PI Controller of a Servo Drive -- An accuracy estimation for a non-integer order, discrete, state space model of heat transfer process -- Dynamic model and simulation of electro-hydraulic proportional valve -- CIE-DataGlove, a Multi-IMU System for Hand Posture Tracking -- Data-driven Video Game Agent Pathfinding -- The Development of PIAP Fenix Mobile Robot --

Calibration of Scanning Electron Microscope with Improved Model of the Silicon Relief Measure -- Gravimeters of Aviation Gravimetric System: lassification, Comparative Analysis, Prospects -- Test Stand for Matteucci Effect Measurements -- Utilization of Deep Reinforcement Learning for saccadic-based object visual search -- Review of 3D Objects Segmentation Methods.

Sommario/riassunto

This book consists of papers presented at Automation 2017, an international conference held in Warsaw from March 15 to 17, 2017. It discusses research findings associated with the concepts behind INDUSTRY 4.0, with a focus on offering a better understanding of and promoting participation in the Fourth Industrial Revolution. Each chapter presents a detailed analysis of a specific technical problem, in most cases followed by a numerical analysis, simulation and description of the results of implementing the solution in a real-world context. The theoretical results, practical solutions and guidelines presented are valuable for both researchers working in the area of engineering sciences and practitioners looking for solutions to industrial problems. .