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Collana	Lecture Notes in Electrical Engineering, , 1876-1119 ; ; 1130
Disciplina	050
Soggetti	Industrial engineering Automation Automatic control Computational intelligence Industrial Automation Control and Systems Theory Computational Intelligence
Lingua di pubblicazione	Inglese
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Nota di contenuto	Approaches to Building an Automated Control System for Plant Production in the Conditions of Greenhouse Effect Dynamics -- Search for Structurally Similar Projects of Software Systems -- Theoretical Foundations of Adaptive Rotary Drilling Control -- Algorithm for Operational Detection of Abnormally Low Electricity Consumption in Distribution -- Effect of Calculation Algorithms on Accuracy of Gas Flow Measurement Result at Low Temperatures -- Multi-agent Control of a Virtual Power Plant in the Context of the Environmental Rating -- Software Development Methodology of Hydrogen Generator Control System Based on User Interface -- CAE/CAM Integration as a Part of Distributed Production -- Representation of the Metagraph from the Position of the Theory of Categories -- Digital System Dynamics Model for a Motor Transport Company -- Using the Long Functional Series in Technical Systems and Increasing Their Efficiency Due to Recurrent Formulae -- Models of the Early Stage in Digital Design -- Features of the Decomposition of Nonlinear Processes and Systems Within the

Framework of the System Approach -- Nonlinear Control of Thermoelectric Peltier Moduls for Climate Management Systems in Agro-Industrial Complex -- Method of Formation of an Artificial Multiphase Field of a Specified Structure During Phase-Metric Technological Control -- Modeling of Spectral Characteristics of the Links of Phase Distortions Autocompensator of Direct Digital Synthesizers -- Method for Taking into Account Measurement Errors When Sorting Elements into Selective Groups -- Deformable Linear Objects Modeling and Manipulation: an Energy-Based Approach -- Combining Disparate Units of a Quasi-Intelligent Decoder -- The Concept of a Software Module for Automating the Route Design of Mechanical Processing Machine Parts for Use as Part of a Machine-Building CAD System.

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Sommario/riassunto

This book reports on innovative research and developments in automation. Spanning a wide range of disciplines, including communication engineering, power engineering, control engineering, instrumentation, signal processing and cybersecurity, it focuses on methods and findings aimed at improving the control and monitoring of industrial and manufacturing processes as well as safety. Based on the 6th International Russian Automation Conference (RusAutoCon2023), held as a hybrid conference on September 10–16, 2023, in/from Sochi, Russia, this book provides academics and professionals with a timely overview of and extensive information on the state of the art in the field of automation and control systems. It is also expected to foster new ideas and collaborations between groups in different countries.

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