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Nota di contenuto	Time-Varying Temperature Prediction in Milling Process Based on the Informer Neural Network Model -- Research on a Machine Vision-Based Chemical Tank Surface Defect Detection System Using Drone Inspection -- Comparative study on energy consumption of vacuum conveying system -- Research on Matrix-Based Manufacturing Systems for Complex Electronic Equipment Using System Dynamics -- Research on Heat Pump Temperature Control System based on Fuzzy PID Algorithm -- Finite Element Analysis of Double-row Tapered Roller Bearing for New Energy Vehicle -- Research and Implementation of On-line Monitoring System for Hydro-generator Units -- Research on Gait Planning and Motion Control Simulation for Robots -- Non-Singular Terminal Sliding Mode Control of PMSM Based on Deadbeat Predictive Current Controller -- The Performance Study of a Novel ZnO Flexible Piezoelectric Sensor Array -- etc.

This volume presents select proceedings from the 5th International Conference on Mechanical Engineering, Intelligent Manufacturing and Automation Technology (MEMAT 2024), held in Nanjing, China. This volume is focused on the rapidly evolving fields of intelligent control systems and mechatronics. The book showcases interdisciplinary innovations that bridge mechanical engineering, automation, and smart technologies. The book covers topics such as intelligent mechatronics and robotics, advanced control design and algorithms, fault diagnosis and maintenance theory, process control and electric automation, etc.. The book serves as a valuable resource for researchers, engineers, and professionals working in materials and structural engineering, offering insights into both theoretical advancements and practical implementations. It also highlights collaborative efforts across academia and industry to address global challenges through innovative engineering solutions.
