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Nota di contenuto	Dynamics Modeling of Active Full-Wheel Steering Vehicle based on Simulink -- Modal Analysis and Dynamics Simulation of Elliptical Trainer -- Research and Design of Vehicle Simulation Subsystem of Testing Platform for CBTC System Based on Linux Power PC -- Analysis and Compensation of Angular Position Error in Servo Assembly -- Research on Exploratory Modeling of Combat Capability of Weapons SoS Based on Synergy -- Research on Vibration Responses of Gear System with Backlash -- Research on Application of CAN Bus Technology in Truck -- Design and Research of Calibration Method for Driving Loading Device of Single-machine Thermal Vacuum Test System -- Wind Power and Hydropower Coordinated Operation Control Strategy Involving Electric Vehicles -- Research on Intelligent Control System of Plate Straightening Based on Knowledge Acquisition -- Numerical Simulation of Submarine Shaft-Rate Electric Field Based on COMSOL Finite Element -- Gauss Hermite PHD Maneuvering Multi-Target Tracking Algorithm -- Research on Driving State Monitoring Based on Vehicle-Road Collaborative Wireless Positioning Technology -- Reliability Analysis of On-Board ATP System in Metro Based on Fuzzy Dynamic Fault Tree -- Image Fusion Based On Convolutional Sparse Representation With Mask Decoupling -- Research of the Test Algorithms of Servo System Frequency Characteristics -- Utilization Factor Calculation Method Based on Adam Algorithm and Neural

Network -- Demand Forecasting of Helicopter Aviation Materials Based on Multi-Model Reliability Analysis -- A Fracture Model Established by Finite Element Simulation and Non-Dominated Sorting Genetic Algorithm II for an Al Alloy -- Research on Fatigue-Magnetic Effect of High-Speed Train Wheelset Based on Metal Magnetic Memory -- Intelligent Manufacturing Information Security Sharing Model Based on Blockchain -- Research into Effects of Pearl Oyster Cultivation in Fresh Water with Extensible Mind Mapping -- Research and Application of Collecting and Integrating Information Fragment Based on Java -- Research on Equipment Health Management Support Information System Based on Big Data -- Study on the Influence Factors of Resident's Utilization of Mobile Health Management APP -- An Improved Adaptive Disturbance Rejection Control Method for the Servo Motor in Robots -- Design and Validation of Three-Axis High Definition Magnetic Flux Leakage Detection Robot for Oil/gas Pipelines -- Research and Implement of Control Platform Based on ROS for Robot Arm -- Research on the Diving Process of Trans-Media Aerial Underwater Vehicle -- Kinematics Analysis of Rowing Machine Based on Ergonomics -- Quality and Safety Assurance for Assembly Application of Industrial Robot in Spacecraft -- Structural Design and Analysis of a Multi-degree-of-freedom Double Friction Wheel High-Frequency Transmitter -- A GPS Group Drift Filtering Algorithm Based on Window Adaptation Speed -- Functional Model Analysis of Level Transition Process of CTCS-3 System -- Switch Fault-Tolerant Control of Six-Rotor UAV Based on Sliding Mode Variable Structure Control -- Design of Spiral Conveying Transposition of Radix Pseudostellariae Mini-Tiller -- Formation Control for A Class of Wheeled Robots with Nonholonomic Constraint -- Study on Energy-Saving Optimization ofTracking Operation High-Speed Trains -- Design PID Controllers for The Air Conditioning Process Using Genetic Algorithm -- Research and Development of Wireless Intercom APP Based on PSO-BP Neural Network Algorithm -- The Collaborative Design of High Speed Servo System Based on DSP and FPGA -- Performance Evaluation System for Agricultural Products Green Supply Chain -- Evolution of Knowledge Space Adaptability in the Famous Grand Demonstration Zone: A Study Based on the Stimulus-response Model -- Design and Implementation of Road Transportation Safety Supervision and Inspection System Based on Workflow and Rapid Development Platform Technology -- Identification of Iris Biological Characteristics Based on LBP Model -- Diagnosis of Intermittent Fault for Analog Circuit Using WPT-SAE -- Predict the Remaining Useful Life of Lithium Batteries Based on EWT-Elman -- Research on Dynamic Path Guidance Algorithm for Road Transportation -- The Hardware Design of a Novel Inductive Contactless Power Transfer System based on Loosely Coupled Transformer -- Online Modeling Method of Fault Diagnosis Based on CNN and OS-ELM -- Azimuth Angle Estimation Method Based on Complex Weight Using Linear Arrays of Vector Sensors -- Study on CFD Simulation of Wind Filed in the Near-Earth Boundary Layer -- Research on the Optimal Water Allocation of Rice Under Insufficient Irrigation Conditions -- Research on Apriori Algorithm Based on Matrix Compression in Basketball Techniques and Tactics -- Simulation Analysis of the Needle Traverse System of Tufting Machine Based on Simulink -- Analysis of the Motion Characteristics of the Elbow-type High Speed Punch Slider Based on ADAMS -- Flow Field Analysis and Verification of Microbubble Generator Based on Three-Phase Flow Dynamics -- Antenna Noise Temperature of the Feed System for Shanghai VGOS Radio Telescope -- Design and Analysis of Remote Automatic Hydrological Cableway Flow Measurement System -- Design

of a Miniaturized Reflectionless Bandpass Filter with High Selectivity for 5G Network -- Monitoring and Early Warning Technology for Internal Cracks of Railhead Based on Lamb Wave -- Research on Signal Conditioning Circuit of Hydrophone Based on MAX262 -- Providing Service Composition to Cyber-Physical System for Industrial Fault Detection -- Research Methods of Artificial Intelligence -- Research on Fire Detection Based on Multi-Source Sensor Data Fusion -- Topology Optimization of Optical Transport Network Based on Network Value -- Pattern Synthesis of a Circular Ring Array Based on Artificial Neural Network -- The Application of HHT and Neural Network in Feature Extraction of Ship Targets -- Fault Diagnosis Technology of Heavy Truck ABS Based on Modified LM Neural Network -- Safety Evaluation of Road Passenger Transportation Process by Fuzzy Comprehensive Evaluation Method and Entropy Value Method -- Transient Stability Feature Selection Method Based on Deep Learning Technology -- Fault Diagnosis of Rolling Bearing Based on EEMD and Optimized SVM -- An Improved Beetle Antennae Search Algorithm -- Research on Attitude Updating Algorithm for Strapdown Inertial Navigation of Long-Range Precision Guided Projectile Based on Directional Cosine Matrix -- Reliability Evaluation for IoT-Based Monitoring System Based on AHP-Fuzzy Comprehensive Evaluation Method -- Data Mining Based on Condensed Hierarchical Clustering Algorithm -- Research on the Management and Maintenance of Computer Room in Colleges and Universities -- An Improved Multilabel Classification Model Based on Mixed Active Learning Framework -- Delay Sensitive Routing in IEEE 802.11 MANETs Based on Channel Busy/Idle Ratio -- Design and Simulation of Active Current Sharing of Paralleled Power MOSFETs -- An Improved Digital Pulse Compression Technique and FPGA Implementation -- Design of Multi-Function Emission Control System of the Full Bridge Inverter -- Torsional Vibration Analysis of RV Reducer Based on Automatic Test System -- Soft Variable Structure Control in Flexible-Joint Robots -- Research on Bubble Diameter Measurement Technology of Transparent Potting Gel Based on Image Processing in Micro Rectangular Electrical Connector -- Research on Self-Balancing Control of the High Water-based Hydraulic Motor's Swiveling Shaft Friction Pair Based on CFD -- Structural Analysis and Optimization Design of Linear Vibrating Screen Based on Abaqus -- Traffic-Aware Resource Allocation and Spectrum Share for LTE-U and Wi-Fi -- Health Assessment of Artillery Command Information System Based on Combination Model -- Study on Influence of ZPW-2000 Jointless Track Circuit Adjacent Section Interference on TCR -- Chinese Speech Syllable Segmentation Algorithm Based on Peak Point and Energy Entropy Ratio -- Design Analysis and Invulnerability of Lunar Wireless Sensor Network -- Influence Analysis of Circular Polarization Characteristics of Sequential Rotating Array Antenna -- Numerical Research on The Extraction and Control of Microwave ECR Plasma Cathode Electron Beam -- Numerical Simulation and Experimental Research on Optimization of Throttle Structure of Relief Valve Spool -- Simulation and Experimental Research on Cavitation Effect of Deflector Jet Valve.

| Sommario/riassunto | This book gathers selected papers presented at the Third International Conference on Mechatronics and Intelligent Robotics (ICMIR 2019), held in Kunming, China, on May 25–26, 2019. The proceedings cover new findings in the following areas of research: mechatronics, intelligent mechatronics, robotics and biomimetics; novel and unconventional mechatronic systems; modeling and control of mechatronic systems; elements, structures and mechanisms of micro- and nano-systems; sensors, wireless sensor networks and multi-sensor data fusion; biomedical and rehabilitation engineering, prosthetics and artificial |

organs; artificial intelligence (AI), neural networks and fuzzy logic in mechatronics and robotics; industrial automation, process control and networked control systems; telerobotics and human–computer interaction; human–robot interaction; robotics and artificial intelligence; bio-inspired robotics; control algorithms and control systems; design theories and principles; evolutional robotics; field robotics; force sensors, accelerometers and other measuring devices; healthcare robotics; kinematics and dynamics analysis; manufacturing robotics; mathematical and computational methodologies in robotics; medical robotics; parallel robots and manipulators; robotic cognition and emotion; robotic perception and decisions; sensor integration, fusion and perception; and social robotics.