

1. Record Nr.	UNINA9910842293903321
Autore	Trong Dao Tran
Titolo	AETA 2022--Recent Advances in Electrical Engineering and Related Sciences
Pubbl/distr/stampa	Singapore : , : Springer, , 2024 ©2024
ISBN	981-9987-03-2
Edizione	[1st ed.]
Descrizione fisica	1 online resource (738 pages)
Collana	Lecture Notes in Electrical Engineering Series ; v.1081
Altri autori (Persone)	Hoang DuyVo Zelinkalvan DongChau Si Thien TranPhuong T
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Preface -- Acknowledgement -- Contents -- Contributors -- Acronyms -- Control Systems -- Model Identification of Gas-Fired Industrial Furnace -- 1 Introduction -- 2 System Description -- 3 Model Identification -- 3.1 Bilinear Model -- 3.2 First Order Plus Dead Time -- 4 Model Evaluation -- 5 Conclusion -- References -- Lyapunov-Based Controller for Bilinear Model Applied to Gas-Fired Furnace -- 1 Introduction -- 2 System Description -- 3 Controller Design -- 4 Result and Discussion -- 5 Conclusion -- References -- Automatic Generation Control Based Sliding Mode Observer Design for Multi-area Multi-source Power Systems -- 1 Introduction -- 2 Mathematical Model of Interconnected Multi Area Multi Source Power Network -- 3 Design of the State Estimator for the Power System -- 4 Design of an Integral Single Phase Sliding Surface -- 5 Design of Total Feedback Output Sliding Mode Controller Design -- 6 Simulation Results and Discussions -- 6.1 Simulation 1 -- 6.2 Simulation 2 -- 7 Simulation Results and Discussions -- Appendix -- References -- The PID Speed Controller Implementation Using Online-GA for Permanent Magnet Synchronous Motor Drive -- 1 Introduction -- 2 Mathematical Model of the Vector Controlled PMSM -- 3 Traditional Speed Controller

Model -- 4 The PID Speed Controller Using Genetic Algorithm -- 5
Simulation Results -- 5.1 Traditional PID Speed Controller -- 5.2 The Online PID Speed Controller Using Genetic Algorithm -- 5.3 Features of Two Speed Controllers -- 6 Conclusion -- References -- Research, Design and Control a New Fresh Orange Juice Vending Machine -- 1
Introduction -- 2 Mechanical Design -- 3 Control System -- 4
Fabrication and Results -- 5 Conclusion -- References -- Integration of Image-Based Object Identification and Distance Estimation Algorithm for Field Operational Test System of Self-driving Vehicles.
1 Introduction -- 2 Dataset Establishment -- 2.1 Object Definition and Classification -- 2.2 Raw Data Refinement -- 3 Deep Learning Algorithm Integration -- 3.1 Object Identification Algorithm -- 3.2 Distance Estimation Algorithm -- 4 Verification of Integrated Algorithm -- 5 Application of Self-driving FOT System -- 6 Conclusion --
References -- Real-Time Robot Gesture Control Using Online Feedback Data with Multi-tracking Capture System -- 1 Introduction -- 2 Proposed Multi-tracking Robot Control System -- 2.1 Vicon Motion Capture System -- 2.2 KUKA YouBot -- 3 Controller Design -- 3.1 Controller Kinematics -- 4 Evaluation -- 5 Conclusion -- References -- Adaptive Sliding Mode Control for Parallel Manipulator Hexapod -- 1 Introduction -- 2 Hexapod Modeling -- 3 Adaptive Sliding Mode Control Design -- 4 Results and Discussion -- 5 Conclusion --
References -- A Study of Optimal Control for Under-Actuated Parallel Type-Triple Furuta Pendulum -- 1 Introduction -- 2 Mathematical Model of RTPIP -- 2.1 Model of RTPIP -- 2.2 Linearization and Stability Analysis of Linear RTPIP -- 3 Control Implementation -- 3.1 LQR -- 3.2 GA-LQR -- 4 Simulation Results -- 4.1 Comparative Analysis Without Disturbance -- 4.2 Comparative Analysis with Disturbance -- 5 Conclusion -- References -- Intelligent Networks -- Passage Detection of a Train via a Reference Point -- 1 Introduction -- 2 Antenna Detection in the Image -- 2.1 Image Processing Approach -- 2.2 Neural Network Application Approach -- 3 Algorithm for Passage Detection -- 4 Application of the Algorithm on the Real Data -- 5 Conclusion --
References -- User Grouping and Relay Selection for Improving Outage Performance of Downlink Wireless Systems -- 1 Introduction -- 2 System Model -- 3 Outage Performance -- 3.1 Channel Fading -- 3.2 Outage Probability of Two Users D1, D2 -- 4 Numerical Results -- 5 Conclusion.
Appendix A -- References -- Priority-Based Uplink Raw Slot Utilization in the IEEE 802.11ah Networks -- 1 Introduction -- 2 Restricted Access Window of the IEEE 802.11ah MAC Protocol -- 3 Priority-Based Uplink Transmission Based MAC Protocol for IEEE 802.11ah Networks -- 3.1 Network Models -- 3.2 Operation of the PUT-MAC Protocol -- 4 Performance Evaluation -- 5 Conclusion -- References -- A Perfect Knife-Bulk Decompilation and Preprocessing Tool -- 1 Introduction -- 2 Methods -- 2.1 A Perfect Knife: Preprocessing -- 2.2 A Perfect Knife: Bulk decompilation -- 3 Results -- 4 Conclusion -- References -- Material Science -- The Enhancement Chromatic Uniformity and Illuminating Flux of WLEDs with Dual-Layer Phosphorus Configuration -- 1 Introduction -- 2 Computational Simulation -- 3 Results and Analysis -- 4 Conclusion -- References -- Study of Sr, Ba₃Si₆O₃N₈:Eu phosphor for Improving Color Quality of White Light-Emitting Diodes -- 1 Introduction -- 2 Experimental -- 3 Results and Analysis -- 4 Conclusion -- References -- Mechatronics -- Toward an Autonomous Operation of Wheel Loaders in Collaboration with a Truck for a Construction Site -- 1 Introduction -- 2 Methodology -- 2.1 Wheel Loader Autonomous Operation Scenario -- 2.2 Target Scenario 1 -- 2.3 Target Scenario 2 -- 3 Integration Scenario -- 3.1

Behavior on Scenario Integration -- 4 Conclusion and Further Work -- References -- Simulation of Fluid Flow and Temperature of Automatic Hand Washing Machine -- 1 Introduction -- 2 Modeling -- 3

Simulation and Experiments -- 4 Conclusion -- References -- Design of Negative Pressure Isolation Room Container Modularization -- 1 Introduction -- 1.1 Medical Fundamental Base for Negative Pressure Isolation Room with Container Modularization -- 1.2 Negative Pressure Room Principal Overview -- 2 Proposed Solutions of NPIR Design -- 2.1 Air Handling System.

2.2 Container Arrangement -- 2.3 Electrical System -- 3 Design of Negative Pressure Isolation Container Module -- 3.1 Disinfection Unit Design -- 3.2 Air Handling Unit Design -- 3.3 Electrical Design -- 4 Results and Simulation -- 4.1 Simulation -- 5 Conclusion -- References -- A Computational Fluid Dynamics Study of Force Generation by Bio-Inspired Continuous Undulating Fins -- 1 Introduction -- 2 Kinematics Model of Continuous Undulating Fins -- 3 Computational Simulation Method -- 4 Parametric Study Results and Discussion -- 4.1 Effect of Undulation Amplitude -- 4.2 Effect of the Oscillating Frequency -- 4.3 Effect of Numbers of Wave Propagation -- 4.4 Effect of Fin Thickness -- 5 Conclusions -- References -- Design of Automatic Sliding Door System for Negative Pressure Isolation Room Modularization -- 1 Introduction -- 2 Automatic Sliding Door Unit Design -- 2.1 Overall About NPIR Structure -- 2.2 Mechanical Design -- 2.3 Electrical Design -- 3 Door Interlock Design -- 4 Simulation and Experiment -- 5 Conclusion -- References -- Motor Control -- A Current Sensor Fault-Tolerant Control Solution for Induction Motor Drive -- 1 Introduction -- 2 Fault-Tolerant Control Against Current Sensor Fault -- 2.1 Induction Motor Drive Applied Field-Oriented Control Method -- 2.2 Current Sensor Fault-Tolerant Control -- 3 Simulation Results -- 4 Conclusion -- References -- PMSM Drive with Sliding Mode Direct Torque Control -- 1 Introduction -- 2 Sliding-Mode-Based Speed Controller -- 3 Simulation -- 4 Conclusion -- References -- Fuzzy Luenberger Observer for Sensorless Control of Induction Motor Drive -- 1 Introduction -- 2 Sensorless Control Utilizing Fuzzy Luenberger Observer -- 3 Simulation -- 4 Conclusion -- References -- Design of Torque Balance Controller for Coaxial BLDC Motor Using Hierarchical Sliding Mode Control Applied for Underwater Vehicle.

1 Introduction -- 2 Modeling of Coaxial BLDC Motor -- 3 Control -- 4 Simulation -- 5 Conclusion -- References -- Optimization -- A Kafka-Based Robot Automation Testing Using Genetic Algorithm -- 1 Introduction -- 1.1 Related Work -- 1.2 Kafka -- 1.3 Robot Framework for Automation Testing (RFAT) -- 1.4 Genetic Algorithm Application -- 2 Applied Methodology -- 2.1 GA Implementation for Data Generation -- 2.2 Optimization Results Analysis -- 3 Discussion and Conclusion -- References -- Applying a Genetic Algorithm to Optimize Linear Quadratic Regulator for Ball and Beam System -- 1 Introduction -- 2 Dynamics of Ball and Beam System -- 3 Linear Quadratic Regulator -- 4 Genetic Algorithms -- 5 Simulation Result -- 6 Conclusion -- References -- Apply the Metaheuristic Algorithm to Allocate Distributed Generation and Minimize the Cost of Energy Losses in the Distribution System -- 1 Introduction -- 2 Problem Formulation -- 2.1 Objective Function -- 2.2 Constraints -- 3 Particle Swarm Optimization (PSO) Applying for Optimal Location and Capacity of Distribution Generations -- 4 Simulation Results -- 5 Conclusion -- Appendix -- References -- A Search Method for Power Transmission System Planning Problem in Ben Tre Province, Vietnam -- 1 Introduction -- 2 Transmission Expansion Planning -- 2.1 Objective Function -- 2.2 Inequality

Constraints -- 2.3 The Proposed Branch and Bound-Based Method -- 3
Case Studies -- 3.1 Overview of the Planned Power Grid -- 3.2 Input
Parameters -- 4 Results -- 4.1 Calculation Results -- 4.2 Power
Distribution After Expanding the Transmission Line -- 5 Conclusion --
References -- Power Electronics -- A Centralized DC Bus Voltage
Control Scheme for Isolated DC-DC Converters in Standalone DC
System -- 1 Introduction -- 2 Stand-Alone DC System -- 2.1 Isolated
Grid-Interface Converter -- 2.2 Primary Control Layer.
3 Proposed Centralized DC Bus Voltage Control Scheme.
