1. Record Nr. UNINA9910842286503321

Autore	Wang Lei
Titolo	Wireless Sensor Networks : 17th China Conference, CWSN 2023, Dalian, China, October 13-15, 2023, Proceedings
Pubbl/distr/stampa	Singapore : , : Springer, , 2024 ©2024
ISBN	981-9710-10-3
Edizione	[1st ed.]
Descrizione fisica	1 online resource (329 pages)
Collana	Communications in Computer and Information Science Series ; ; v.1994
Altri autori (Persone)	QiuTie LinChi WangXinbing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Preface -- Organization -- Contents -- Theory and Technology on Wireless Sensor Network -- MPR Node Selection Improvement in OLSR Based on Binary Cuckoo Search -- 1 Introduction -- 2 Related Works -- 3 Cuckoo Search and Binary Cuckoo Search -- 3.1 Cuckoo Search -- 3.2 Binary Cuckoo Search -- 4 Proposed Protocol -- 4.1 Weight of Candidate Nodes -- 4.2 The MPR Node Selection Based on BCS -- 5 Performance Evaluation -- 6 Conclusions -- References -- Research on Energy Consumption Optimization Using a Lyapunov-Based LSTM-PSO Algorithm -- 1 Introduction -- 2 System Model -- 2.1 System Basic Elements -- 2.2 Transmission Model -- 2.3 Task Queue Model -- 2.4 Energy Model -- 3 Problem Formulation -- 3.1 Setting up Lyapunov Virtual Pairs of Columns -- 3.2 Constructing the Lyapunov Function -- 4 Algorithm Design -- 5 Numerical Results -- 5.1 Basic Settings -- 5.2 Evaluation with Different Delay Requirement Task -- 6 Conclusion -- References -- Attitude-Aware Based Geographical Opportunity Routing Protocol for Floating Wireless Sensor Network -- 1 Introduction -- 2 Background and Motivation -- 2.1 Attitude-Aware Based Link Model -- 2.2 Geographical Opportunity Routing Protocol -- 3 Design -- 3.1 Overview -- 3.2 Network Initialization -- 3.3 Forwarding Area Establishment -- 3.4 Relay Node Selection -- 4 Evaluation -- 4.1 Experiment Setup -- 4.2 Attitude

Angle in Real Scenario -- 4.3 End-to-End Reliability -- 4.4 End-to-End Delay -- 5 Related Work -- 6 Conclusion -- References -- Dynamic Liveness Detection Based on Fusion of mmWave Radar and Vision -- 1 Introduction -- 2 Motivation -- 2.1 Limitation of Existing Solutions -- 2.2 Opportunity -- 3 mmWave Radar Feature Extraction Mechanism for Live Cyclist -- 3.1 Radar Data Collection and Processing -- 3.2 Radar Cross Section (RCS) -- 3.3 Building Signal Strength Reference Database.
3.4 RCS Value: Cyclists vs. Visual Interference -- 3.5 Summary -- 4 mmWave Radar and Vision Fusion Mechanism -- 4.1 mmWave Radar Pixel Image -- 4.2 Multi-modal Feature Extraction -- 4.3 Feature Fusion Module Based on Attention Mechanism -- 5 Evaluation -- 5.1 Dataset and System Environment -- 5.2 Evaluation Methodology -- 5.3 Overall Performance -- 5.4 Sensitivity Analysis -- 6 Conclusion -- References -- LMCRA: A Reliable Satellite Internet Routing Method with Low Maintenance Cost -- 1 Introduction -- 2 Related Work -- 2.1 Centralized Routing -- 2.2 Distributed Routing -- 2.3 Hybrid Routing -- 3 System Architecture -- 4 Algorithm Design -- 4.1 Calculation of Satellite Network Period and Design of Low Maintenance Cost Routing -- 4.2 A Routing Algorithm Considering Latency and Path Stability During a Cycle -- 4.3 Fast ReRouting Mechanism -- 5 Simulation Experiment Evaluation -- 5.1 Simulation Environment -- 5.2 The Impact of Networking Methods on Algorithm Performance -- 5.3 The Impact of Time Spans (Parameter N) on Algorithm Performance -- 5.4 The Impact of Constellation Density on Algorithm Performance -- 5.5 Evaluation of FRR-BP -- 6 Conclusion -- References -- Application on Internet of Things -- WiHI: Indoor Human Identification with WiFi Signals -- 1 Introduction -- 2 Preliminary -- 3 System Design -- 3.1 System Architecture -- 3.2 Data Collection -- 3.3 Data Processing -- 3.4 Motion Change Pattern Extraction -- 3.5 Human Identification -- 4 Experiments and Evaluation -- 4.1 Overall Performance -- 4.2 Performance Evaluation -- 4.3 Limitations and Discussion -- 5 Conclusion -- References -- Age of Information-Based Channel Scheduling Policy in IoT Networks Under Dynamic Channel Conditions -- 1 Introduction -- 2 System Model -- 2.1 AoI and Throughput Model -- 2.2 Problem Definition -- 3 Scheduling Policy.
3.1 Priority-Based Scheduling Policy Considering AoI and Throughput, PSP-AT -- 3.2 Dynamic Classification-Based Priority Scheduling Policy, DCP-AT -- 4 Experiment and Result -- 4.1 Experiment Setup and Parameter Settings -- 4.2 Result -- 5 Conclusion -- References -- Underwater Target Detection Based on Dual Inversion Dehazing and Multi-Scale Feature Fusion Network -- 1 Introduction -- 2 Multiscale Feature Fusion Deep Learning Object Detection Network -- 2.1 Dual Inverted Dehazing Module (DRDM) -- 2.2 Feature Enhancement Module (SFEM) -- 3 Simulation Experiment Results -- 3.1 Wilder Fish New Dataset and Environment -- 3.2 Comparison of Output Feature Maps -- 3.3 Comparison of Loss Function -- 3.4 Comparison of Algorithm Detection Effects -- 4 Conclusion -- References -- Security and Privacy Protection on Internet of Things -- Honeynet Module Simulation and Dynamic Configuration of Honeypots Based on Online Learning -- 1 Introduction -- 2 Background -- 2.1 Virtual Honeypot Module Simulation -- 2.2 Physical Honeypot Module Simulation -- 2.3 Data Collection Module -- 3 Dynamic Honeypot Configuration Based on Online Learning -- 3.1 Specific Implementation -- 3.2 Experiment and Analysis -- 4 Honeynet System Deployment and Testing -- 4.1 Honeynet System Construction -- 4.2 Honeynet System Deception Test -- 4.3 Honeynet System Interactivity Test -- 5 Conclusion -- References -- Fog Computing and Wireless Computing -- Edge-Assisted Multi-camera Tracking for Digital Twin Systems -- 1

Introduction -- 2 Related Work -- 3 Proposed Method -- 3.1 Design Overview -- 3.2 Target Tracking in 3D Coordinate System -- 3.3 Multi-camera Target Identity Re-identification Algorithm -- 3.4 Occlusion Processing -- 4 Evaluation -- 5 Conclusion -- References -- Layer-First ``Cache-Rollback'' Collaborative Pruning Method -- 1 Introduction.
2 Layer Pruning Method Based on Model Recovery Force -- 3 Layer-First ``Cache-Rollback'' Collaborative Pruning Method -- 3.1 Layer-Channel Collaborative Pruning Method -- 3.2 Efficiency Analysis -- 4 Simulation Experiment -- 4.1 Experiment Setup -- 4.2 Rationality and Universality Verification -- 4.3 Comparison of Common Pruning Methods -- 5 Conclusion -- References -- The Model and Method of Electricity Consumption Data Collection Based on Producer and Consumer -- 1 Introduction -- 2 Strategies for Dynamic Adjustment of Consumer Numbers -- 3 Evaluation of the Performance of the Dynamic Adjustment Strategy for the Number of Consumers -- 4 Experimental Results and Analysis -- 5 Conclusions and Future Work -- References -- Design and Analysis of Service Resource Allocation Scheme Based on Mobile Edge Computing -- 1 Introduction -- 1.1 Background -- 1.2 Contribution and Structure -- 2 System Model -- 2.1 Terminal Device -- 2.2 Sever -- 3 Problem Solving -- 3.1 Offload Decision -- 3.2 Offloading Stage -- 4 Algorithm Introduction -- 4.1 State Space Definition -- 4.2 Action Space Definition -- 4.3 Reward Function Definition -- 5 Analysis of Experimental Results -- 5.1 Convergence -- 5.2 Performance -- References -- Edge Computing Task Unloading Decision Optimization Algorithm Based on Deep Reinforcement Learning -- 1 Introduction -- 2 System Model -- 2.1 Serial Task Model -- 2.2 Delay Model -- 2.3 Energy Consumption Model -- 2.4 Problem Statement -- 3 Algorithm Model -- 4 Experimental Results and Analysis -- 5 Conclusion -- References -- Intelligent Internet of Things -- WiKnow: A Human Activity Recognition Method in Office Scene with Coordinate Attention from WiFi Channel State Information -- 1 Introduction -- 2 Related Work -- 2.1 Vision-Based HAR -- 2.2 Wearable Device-Based HAR -- 2.3 WiFi-Based HAR -- 3 Background of CSI -- 4 System Design.
4.1 System Overview -- 4.2 Signal Pre-processing Module -- 4.3 CSI Data Reconstruction Module -- 4.4 HAR Classification Module -- 5 Dataset -- 5.1 Own Dataset -- 5.2 StanWiFi -- 6 Performance Evaluation -- 6.1 Experimental Results on Own Dataset -- 6.2 Experimental Results on StanWiFi -- 7 Conclusion and Future Work -- References -- DRL-Based Scheduling Scheme with Age of Information for Real-Time IoT Systems -- 1 Introduction -- 2 System Model and Problem Formulate -- 2.1 Network Model -- 2.2 AoI Model -- 2.3 Problem Formulation -- 3 Online Algorithm Design Based on DRL -- 4 Simulation Results -- 5 Conclusion -- References -- Reverse Multidimensional Auction Based Vehicle Selection and Resource Allocation for IoV -- 1 Introduction -- 2 System Model and Problem Formulation -- 2.1 Heterogeneous Data Model -- 2.2 Training Cost Model -- 2.3 Auction Model -- 2.4 Problem Formulation -- 3 Algorithm Design and Theorem Analysis -- 3.1 Algorithm Design -- 3.2 Payment Confirmation -- 3.3 Theoretical Analysis -- 4 Performance Evaluation -- 4.1 Comparison of Social Welfare -- 4.2 Virtual Global Dataset Quality Comparison -- 5 Conclusion -- References -- Universal Handwriting Recognition for Mobile Devices via Acoustic Sensing -- 1 Introduction -- 2 Related Works -- 2.1 Sensors-Based Handwriting Recognition -- 2.2 Acoustic-Based Handwriting Recognition -- 3 System Design -- 3.1 Pre-processing -- 3.2 Character Recognition -- 4 Evaluation -- 4.1 Experimental Setting --

4.2 Overall Recognition Performance -- 4.3 Impact Factors -- 5 Discussion -- 6 Conclusion -- References -- Reinforcement-Learning-Based 2D Flow Control for Logistics Systems -- 1 Introduction -- 2 Related Works -- 2.1 Logistics System Problems -- 2.2 Reinforcement Learning Theories -- 2.3 Technical Challenges -- 3 Structure of Omniveyor and Model Definition -- 3.1 Structure of the Omniveyor. 3.2 Spatio-Temporal Graph.